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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;
NOW IN COURSE OF DELIVERY AT THE THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.

BY

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&c., &c.

DISEASES OF THE RESPIRATORY SYSTEM.—*Chronic laryngitis, or tracheitis; history and symptoms; illustrative case; diagnosis. Complications with disease of the lungs. Treatment of chronic laryngitis. History, symptoms, and varieties of bronchitis; its pathology and treatment. Hay-asthma; description of the complaint by Dr. Bostock; difficulties of cure. Pneumonia; its history, symptoms, pathology, and treatment. Gangrene of the lung. Emphysema. Hydrothorax and pneumothorax. Angular distortion of the spine.*

GENTLEMEN:—In the commencement of these lectures on the Diseases of the Respiratory Organs, I have divided them into the acute, the chronic, and the insidious. I now proceed to treat of the second division of this arrangement.

Almost every disease of the chest may assume the three forms to which I have adverted. Even tubercle, the most insidious of diseases in some cases, may assume the acute character; and all those diseases which are usually acute, may assume the chronic, or the insidious, or *latent* form, in their commencement or in their course. No disease can illustrate this statement more distinctly than that which I must mention in the first place, viz., laryngitis.

There is another most important question,—Does not *inflammation* frequently prove the cause—the exciting cause—of tubercle? This question I shall discuss presently, and, in doing so, I shall again have to introduce to you an important extract from the manuscript of M. Louis,—a manuscript which alone would make these lectures invaluable, containing, as it does the pith of M. Louis' publication and subsequent researches on this subject.

I proceed, then, to treat of

THE CHRONIC DISEASES OF THE CHEST.

I.—LARYNGITIS OR TRACHEITIS.

1. *The History.*— Chronic laryngitis is sometimes insidious, sometimes the sequela of laryngitis in the acute form.

2. *The Symptoms* in chronic laryngitis are difficult and hoarse or sonorous respiration, a croupy cough, and dysphagia; there is a sense of stricture or of soreness distinctly referred to the larynx; and there is, at length, the remarkable symptom of inability of snuffing up the nostrils, or of drawing the alæ nasi together by quick inspiration.

Tracheitis is distinguished by the absence of dysphagia, and by the seat of stricture and uneasiness.

I must exemplify this interesting subject by a case which occurred to me in the year 1817, and was published in the "Medico-Chirurgical Transactions," vol. x, p. 166.

Mrs. Ann Hatton, aged 53, became affected, in the latter end of September, 1817, with hoarseness and a hard, dry cough. These two affections continued to augment in severity, without any additional symptom, during two months; when, about the 13th of November, a degree of difficulty in breathing, referred by the patient to a "tightness in the throat," was superadded to them, and she discovered that she was unable to "snuff up" through the nose in inspiration in the ordinary way. During two subsequent months the hoarseness, cough, and dyspnœa continued and increased; and about the commencement of February, 1818, she began to experience, in addition, a degree of difficulty in swallowing. In the beginning of March she observed a swelling, rather diffused, but said to have been of the size of a pigeon's egg, over the upper part of the thyroid cartilage, with an increase of the dyspnœa and dysphagia. A liniment was employed for this tumour, by which it was reduced in size, and the difficulty in breathing and in swallowing was diminished. In a short time, however, these

symptoms became again aggravated, and they continued to augment until the month of August.

During the course of this affection, Mrs. Hatton constantly referred the seat of the difficulty of breathing to a tightness at the upper part of the larynx. She has always been affected with cough, accompanied by a peculiar, harsh, croupy sound in the throat, at first hard and dry, but more recently attended with the expectoration of viscid mucus, tinged with blood. The dyspnœa had been constant, and lately much aggravated, precluding sleep, or putting a period to sleep by inducing a sense of impending suffocation, and rendering a raised position in bed absolutely necessary. Lately, too, she had suffered from fits of increased dyspnœa, threatening suffocation, obliging her to run for relief to the open window, and causing great anxiety and urgent distress.

Mrs. H. applied to me on the 15th of August, 1818. She was then affected with a degree of hoarseness, which rendered the voice scarcely audible. There was a perpetual dyspnœa referred by the patient, by the noise in the breathing, and by the sound of the cough, to the upper part of the larynx. She swallowed with great difficulty and effort. There was no obvious general tumefaction of the upper parts about the larynx, occupying the left rather more than the right side. She stated that she experienced great difficulty in walking up a hill or pair of stairs. She described the impossibility of snuffing up the nostrils, an effect, I suppose, of the partial closure of the larynx; for, to produce this snuffing, it is necessary that a certain quantity of air should be drawn through the nostrils with a certain velocity; and, in the present instance, the quantity of air admitted appears to have been too small. The patient experienced increased uneasiness on drawing the head backwards. A bougie was passed into the œsophagus, but met with no resistance.

On the 15th of August I recommended five grains of the pil. hydrarg. to be taken every night and morning, half an ounce of the sulphate of magnesia twice in the week, four leeches to be applied over the larynx every other day, and a lotion constantly, when the leechbites were not bleeding.

On the 22nd of August, I again saw Mrs. H. The symptoms were unabated. The mercurial had produced no effect on the gums. Mrs. H. was now induced to remain under my immediate care. There was a degree of emaciation and debility; the pulse was rather frequent and feeble; the appetite impaired. The pil. hydrarg. was continued three times a day.

On the evening of the 24th, Mrs. H. was seized with an alarming fit of dyspnœa, to which I was witness. There was the greatest anxiety of countenance and manner, and, in the breathing, every auxiliary muscle of respiration was called into exertion, and there was every appearance of impending suffocation. The dyspnœa had abated somewhat in violence, and there had been similar fits of dyspnœa before, or I should have immediately recommended the operation of laryngotomy. The difficulty of breathing abated gradually, and I left my patient in her usual state of dyspnœa.

In consultation with Mr. Oldknow, a most skilful surgeon of this town, it was concluded that the operation of laryngotomy was necessary to avert the danger of suffocation, incurred during the fits of dyspnœa. The operation was therefore performed on the 25th instant.

This operation afforded immediate relief to the respiration, and Mrs. H. slept soundly through the ensuing night, for the first time for a long period. Deglutition continued difficult, and always induced coughing during five or six subsequent days. The cough raised some viscid mucus, which was forced through the orifice made by the operation. The voice was quite lost.

On the day of the operation the ung. hydrarg. was prescribed to be rubbed in, in the quantity of half a drachm morning and evening. The ol. ricini was ordered to open the bowels.

On the 28th the mouth became sore. Mrs. H. soon afterwards experienced a mitigation of the difficulty in swallowing; and, on applying the finger to the opening into the larynx, she found, in a short time, that the tightness in the respiration was also diminished, and that she could breathe with greater facility than before the operation, and, as she expresses it, more freely through the nose.

This amendment continued progressive, and on the 5th of September, the orifice into the larynx so far closed, after an attack of sickness and retching, induced by the ol. ricini, that the air only passed through it during respiration. On the 11th the orifice closed finally; the respiration, however, was free, the swallowing easy, and there was a slight return of voice even. On the 13th I again heard from Mrs. H., who had returned home; the amendment continued; the mouth was extremely sore. The ung. hydrarg. was ordered to be used more sparingly.

On the 22d I paid Mrs. H. a visit. She was sitting up in bed. She breathed with perfect freedom, and had no paroxysm of augmented dyspnœa since the time of operation: she swallowed without uneasiness or effort, and, as she said, as well as ever; the whisper had advanced to a hoarse voice; and she could snuff up the nose with the usual force. Speaking, however, still required much effort, from the remaining hoarseness; and, in swallowing, the skin just above the cicatrix, was drawn into wrinkles, being raised by its adhesion to

the thyroid cartilage. The tumefaction about the larynx had disappeared. There was scarcely any cough, and but the scanty expectoration of a little mucus. The general appearance, strength, and appetite, were improved. She could lie down, and slept the night through. The mouth was better, but still affected by the mercury.

October the 27th. Soon after the date of the last report, Mrs. H. imprudently left her bedroom, and exposed herself to the draughts of air in a room with three doors. She appeared to take cold in consequence, and a degree of difficulty in deglutition, and a loss of the voice formerly regained, were the effects. She came once more to Nottingham; she was once more put upon a course of the ung. hydrarg.; and, in proportion as this remedy induced ptyalism, the dysphagia disappeared entirely, and the voice became again improved. To-day, two months after the operation, she only suffers from the effect of the mercury on the mouth; the respiration and the swallowing are quite natural, and the general health and appetite are good. She returns home, with the recommendation to continue the use of the ung. hydrarg. for a time, to put on flannel, and cautiously to avoid exposure to cold.

This statement of amendment still continued on the 16th of December, and on the 29th of April, 1819, when Mr. H. called to give the most satisfactory account of Mrs. H.'s recovery and general health.

3. *The Diagnosis.*—It is important to bear in mind that chronic laryngitis or tracheitis may be supposed to exist when, in fact, the case is *hysteria*, or the trachea is compressed by

1. *A Tumour*,
2. *An Abscess*, or
3. *An Aneurysm!*

The young physician, being aware of the danger of this mistake, will seek the diagnosis in the symptoms peculiar to these diseases.

There is another important question:—Are the *lungs* free from disease in all cases of chronic laryngitis?

In general it may be stated that in *inflammation* of the larynx, the lungs *are* free from disease, whilst in *ulceration* of that organ, they are *always* affected with tubercle, except, indeed, in the case of *syphilis*. But the former part of this rule is not without exception. In a case of laryngitis, threatening suffocation, tracheotomy was performed by Mr. Walford. The *relief* was perfect. But the patient sank and died with the symptoms of phthisis, and the lungs were found, on examination, studded with tubercles, the larynx being free from ulceration.

4. *The Morbid Anatomy* consists in thickening of the mucous membrane lining the larynx or trachea, sometimes with effusion from its surface, or œdema of the subjacent cellular substance. There is frequently increased bronchial secretion or pulmonary œdema.

Chronic bronchitis is sometimes, although far less frequently than ulceration of the larynx, associated with *tubercles*.

5. *The Treatment* is admirably illustrated by the case already detailed,—speedily to affect the mouth with *mercury*. *Tracheotomy* must be performed *early* if there be suffocative attacks of dyspnœa. Leeches, blisters; ipecacuanha, or antimony; the hyoscyamus; the oleum ricini as an aperient, will be valuable auxiliary remedies. Fomentations and cataplasms, and the inhalation of the vapour of hot water, also relieve exceedingly.

Moisture, with a regulated temperature in the atmosphere, demulcent fluids for diet, &c., are also important remedies.

II.—Bronchitis.

1. *The History.*—Chronic bronchitis is usually the consequence or issue of an acute attack of this disease. It may exist with or without fever. It is a frequent disease of old age; sometimes its simple effect.

2. *The Symptoms* are those of ordinary bronchitis protracted: there is the absence of the pectoriloquy and cavernous respiration of phthisis; the sound of the chest and of the respiration is unimpaired; there is a degree of pallor, and frequently weakness and emaciation; dyspnœa is easily induced by exertion, or there may be confirmed dyspnœa.

The expectoration is very various in different cases and at different periods of the same case: generally copious, it is sometimes so much and so suddenly so as to lead to the erroneous idea of a ruptured abscess; it is frequently opaque, and greenish from the admixture of black pulmonary matter; occasionally it is fœtid, and more of a gangrenous odour; it is sometimes mixed with blood.

3. *The Varieties.*—Besides the common or mucous form of chronic bronchitis, there are several others to which it is necessary to advert briefly in this place; they are—

1. *The Pituitous.*
2. *The Dry.*
3. *That with Dilated Bronchia.*
4. *That with Dilated Air-cells, or Emphysema.*
5. *The Symptomatic.*

The first of these is distinguished by the peculiar expectoration; the second, by the want of it, with peculiar sonorous rattles; the third, by bronchial respiration and bronchophony. The symptoms of emphysema, and of the diseases of which bronchitis may be sympathetic, will be detailed hereafter.

The sympathetic forms are traceable to other diseases of the *lungs*, of the *heart*, of the *liver*, &c.

Besides these forms of bronchitis there are others still, which I need but enumerate

in this place; they are those attended with

1. *Polypi.*
2. *Ulcers.*
3. *Diseased Cartilages.*
4. *Diseased Bronchial Glands.*

4. *The Morbid Anatomy* is similar to that of acute bronchitis; the bronchia and the air-cells are sometimes dilated.

5. *The Treatment* of chronic bronchitis consists in the administration of mercurials, antimonials, the balsam of copaiba, &c. I have experienced great advantage from pills containing a grain of ipecacuanha, three of the pilula aloës et myrrhæ, and of the pilula scillæ, and of the extractum hyoscyami, given every night, or night and morning. The *persevering* use of fomentations, and especially of liniments, applied to the anterior and posterior parts of the thorax, is also extremely valuable.

III.—Hay-Asthma.

There is a form of chronic bronchitis which occurs in the hay season, or at least in summer, which has been termed *hay-fever*, or *hay-asthma*, and by Dr. Bostock, who has suffered himself from this malady, *catarrhus æstivus.*

It consists in an inflammatory state of the conjunctiva, and the mucous membrane lining the nostrils and the air-passages in general. It is attended by sneezing, cough, dyspnœa, &c., in exacerbations.

It is relieved chiefly by change of air, especially that by the sea-coast. Ordinary remedies have little efficacy in subduing this disease.*

Dr. Bostock observes,—"The number of cases which I have either seen, or of which I have received a distinct account, amounts to eighteen, besides about ten others, which are less correctly ascertained. They all agree in the complaint making its appearance at the same season of the year, in its seat being the membrane lining the nose, the fauces, and the vesicles of the lungs, and, for the most part, in the paroxysms being excited and the symptoms aggravated by the same causes.

"One of the most remarkable circumstances respecting this complaint, is its not having been noticed as a specific affection, until within the last ten or twelve years. Except a single observation of Heberden's, I have not met with anything that can be supposed to refer to it in any author, ancient or modern. I have at various times stated the particulars of my case to some of the most eminent physicians in London, Edinburgh, and Liverpool, and have very gratefully to acknowledge their kindest sympathy and attention; but, until very lately, it was always considered by them as an anomalous train of symptoms, and no one appeared to have witnessed any occurrence of a similar kind, and the same sentiment I recollect to have prevailed in this Society nine years ago, on the reading of my former paper. The first intimation which I received of a contrary opinion was from the late Dr. Baillie, who, in the summer of 1822, related to me three cases which he considered as similar to my own. Yet, as there appears to be nothing either in the cause or nature of the complaint, which can induce us to suppose that it is actually a new disease, we are obliged to conclude that it had been regarded as a mere modification of the common catarrh.

"The twenty-eight cases referred to above, all agree in the complaint commencing about the end of May, or the beginning of June, and continuing from four to eight weeks. Most of them are attended with fulness of the head, stoppage of the nose, sneezing, watering of the eyes, and discharge from the nostrils. In about half of the whole number the respiration is considerably affected, and in three or four instances it is almost the only symptom. Some of the cases are attended with distinct cough, most of them with irritation of the fauces, and some with a degree of sore throat. Actual inflammation of the eyes is not a very common occurrence, and in some of the cases there is not even the discharge of tears, or the irritation of the eyes. The degree of general indisposition varies very much in the different cases; in some the patient, during the whole period, is unable to use any exertion, or to continue his ordinary occupations, while in other instances he feels no inconvenience, except what arises from the fits of sneezing, and the copious discharge from the nose.

"The immediate cause of the symptoms seems to be sufficiently obvious; it consists in an increased action of the vessels of the membrane which lines the eyelids, the nose, the fauces, and the pulmonary vesicles, by which it becomes acutely sensible to external impressions, has its natural secretions augmented, and probably its bulk increased; to this last cause I think we may ascribe the very distressing sense of dyspnœa which exists in some of the cases. Although this membrane is continued without interruption over the different organs that are the seat of the affection, yet it is observed that the different parts are affected in different degrees. Hence we may divide the disease into four varieties, according as the eyes, the nose, the fauces, or the lungs, is the part more immediately affected. It is in the last variety only, that I have observed the constitutional symptoms of fever and the subsequent debility to exist in any considerable degree; and in this case I think we may account for the effect, by supposing that the thickened state of the membrane which lines the vesicles, prevents the

* There is a full account of this singular affection by Dr. Bostock, in the "Transactions of the Medico-Chirurgical Society," vol. x., p. 161, and vol. xiv., p. 437.

oxygen of the inspired air from duly acting on the blood.

"With respect to what is termed the exciting cause of the disease, since the attention of the public has been turned to the subject an idea has very generally prevailed that it is produced by the effluvium from new hay, and it has hence obtained the popular name of the hay fever. As it is extremely important to ascertain the truth of this opinion, I have made it the subject of distinct observation, as far as regards my own person, and by minutely attending to the accession of the symptoms, for a number of successive seasons, in relation to this supposed cause, I think myself fully warranted in asserting, that in my own case the effluvium from hay has no connection with the disease.

"As far as regards medical treatment, an anxious desire to obtain relief from an annual indisposition of several weeks continuance, and sometimes of considerable severity, has induced me to try, with the greatest perseverance, every remedy which held out the least prospect of advantage. I think myself warranted in asserting that, on the whole, the depleting system is injurious, and that some benefit is gained by a moderate use of tonics.

"The experience of many years has taught me not to expect a cure for the complaint, so that I now only aim at relieving any peculiarly urgent or distressing symptoms. Bathing the eyes in tepid water, and fomenting the face generally, occasionally applying small blisters to the chest, mild purgatives, small doses of ipecacuanha, Dover's powder, squills, and digitalis, bathing the feet in warm water, a moderate but not spare diet, perfect rest, and carefully avoiding all extremes of heat, comprise the whole of the means that I have found useful to myself."

IV.—Pneumonia.

1. *The History.*—Chronic pneumonia is rare, and generally a sequela of the acute form of the disease, or of pulmonary hæmorrhage.

2. *The Symptoms.*—It is marked by the same symptoms and signs as the acute pneumonia.

As pleuritis is frequently confounded with the pneumonia, there is, occasionally, the noise induced by the contact and rubbing together of the two adjacent portions of the pleura in respiration. I have observed another phenomenon in this disease, which may serve to distinguish it from pleuritic effusion: the intercostal spaces drawn inwards at each inspiration.

Pleuritic effusion frequently presses down the liver below the edges of the false ribs; chronic pneumonia is apt to induce congestion and enlargement of this organ.

3. *The Morbid Anatomy* consists in the *red induration*, or *hepatisation*.

4. *The Treatment* consists in the careful administration of mercurials and antimonials; in the local application of a seton, a liniment, fomentations, cataplasms, &c., and especially, in a voyage to the West Indies.

Aperients relieve the liver; diuretics tend to prevent the supervention of anasarca.

V.—Pleuritis.

1. *The History.*—Chronic pleuritis, far more common than chronic pneumonia, occurs in feeble or cachectic subjects, and may possess its chronic form from the beginning; or it may be the sequela of acute pleuritis.

2. *The Symptoms.*—In chronic pleuritis the symptoms are generally such as denote a profuse effusion: there is the want of sound on percussion, and of respiration under the ear or stethoscope; pleuritic pain and ægophony are rare; but, on the other hand, an enlargement of the side of the thorax is not uncommon. There are fever, emaciation, and cough, with mucous or even puriform expectoration.

3. In the course of this affection, when it proves fatal, the following complications occur:—

a. Congestion or Effusion within the Head.
b. Anasarca; especially of the Arm, and Leg, of the side affected.

4. *Varieties.*—In the case which has been described, there is, when the effusion is very great, *dilatation of the thorax*: in other instances, the effusion is slowly absorbed, but the lung, bound down by strong layers of lymph, does not expand; the thorax is, therefore, contracted.

Both these states are determined by the eye, and by admeasurements.

In a third case, the heart is pushed or drawn from its natural position.

5. *The Morbid Anatomy* is similar to that of acute pleuritis: the effusion is generally more abundant; frequently flocculent, or puriform; and sometimes of a slightly disagreeable odour. In contraction of the chest, the lung is bound down by lymph, and carnified.

6. *The Treatment* of chronic pleuritis consists almost entirely in *topical* applications to the affected side,—a seton, a liniment, fomentations, cataplasms, the occasional application of leeches or of the cupping instrument.

To these remedies mercurials must be cautiously added.

The remedy, par excellence, as in so many other diseases of the chest, is a voyage to the West Indies.

VI.—Gangrene (Circumscribed).

1. *The History.*—Diffused gangrene is rapid, the circumscribed very slow in its course.

2. *The Symptoms.*—The peculiar greenish or brownish expectoration, of gangrenous odour, is the pathognomonic symptom. With

it there are pectoriloquy, and cavernous respiration, rattle, and cough.

3. *The Morbid Anatomy* is similar to that of diffused gangrene: it is circumscribed, sometimes affecting a tuberculous cavity; sometimes involving and destroying the pleura and opening a communication with its cavity.

VII.—Emphysema.

VESICULAR EMPHYSEMA.

1. *The History.*—This disease is most frequently the issue of repeated attacks of that form of bronchitis termed the *dry*; it also frequently constitutes the disease termed *asthma*; and, in its turn, it frequently causes hypertrophy or dilatation of the heart.

2. *The Symptoms.*—Emphysema is the most frequent of the varied forms of disease to which the designation of *asthma* has been given; its principal symptom is, as that name imports, great dyspnœa; this dyspnœa recurs in paroxysms and becomes more and more habitual or permanent; there is a dull-sounding cough, at first dry, afterwards with expectoration; the chest is large and elevated; the complexion becomes dingy, the lips livid.

These symptoms may well lead to the suspicion of emphysema; the pathognomonic signs are afforded by percussion and auscultation; the chest sounds remarkably well; the respiration is scarcely audible; there is sometimes a crepitant rattle, not constant, but during short spaces of time, which differs from that of pneumonia by communicating the idea of dryness.

Vesicular emphysema may be extended to both lungs, or confined to one.

3. *The Morbid Anatomy* consists in the dilatation of the air-cells: this is sometimes visible, sometimes invisible, externally; sometimes the dilated cells are prominent, and sometimes even globular, with a narrow attachment only. Sometimes the textures break, and there is emphysema.

The vesicular and interlobular emphysema present a few points of difference not necessary to notice.

4. *The Treatment.*—Much relief is obtained from the remedies prescribed for chronic bronchitis.

INTERLOBULAR EMPHYSEMA.

This form of the disease arises from violent efforts, consists in the ruptured cells of the lobules, and is denoted by the crepitant rattle "a grosses bulles," and by the noise of ascending and descending friction against the adjacent pleura; there is sometimes external emphysema.

1. *The History.*—Œdema is rarely an *idiopathic* disease; it is, on the contrary, generally a *complication* or *sequela* of

a. Protracted fevers.
b. Disease of the heart.
c. Pneumonia.
d. Bronchitis, especially the pituitous.
e. Other dropsies, &c.
f. Loss of blood.
g. Chlorosis.

2. *The Symptoms* are dyspnœa, slight cough, and aqueous expectoration. The stethoscope affords two signs of this disease; a diminished respiration, and a subcrepitant rattle.

3. *The Morbid Anatomy.*—The lung is dense, and at once crepitant and retaining the impression made by the finger; on making an incision, there is a copious flow of limpid fluid.

4. *The Treatment* consists in gentle tonics and stimulants, and the remedies mentioned.

X.—Hydrothorax.

IDIOPATHIC HYDROTHORAX.

This affection is extremely rare. It usually exists on one side alone, and then this side is larger than the other. The symptoms are precisely detailed, as denoting effusion in pleuritis.

SYMPTOMATIC HYDROTHORAX.

This affection is as common as the idiopathic is rare. It may be the effect of all diseases, towards their close, acute or chronic; but it is chiefly so, of

1. *Diseases of the heart.*
2. *Diseases of the lungs.*
3. *Diseases of the liver.*

It frequently exists on both sides of the thorax. Its symptoms are similar to those described.

The Treatment consists in remedies for the original disease, diuretics, paracentesis (?), &c. This last remedy is adopted only when absolutely necessary from the urgency of the dyspnœa.

XI.—Pneumothorax.

Pneumothorax may exist under the following forms:—

a. The simple.
b. Complicated with pleuritic effusion.
c. Complicated with a fistulous communication with the bronchia.
d. The double.

1. *The History.*—This disease, when simple, most frequently occurs with pleuritis, in cases of phthisis. It may be simple, or complicated with effusion, or with a communication with the bronchia by means of a softened tubercle. It may be the result of the effusion and decomposition of blood, or the consequence of circumscribed gangrene.

2. *The Symptoms.*—There is dyspnœa, and the side affected is generally enlarged. But the true diagnostics are derived from a comparison of the effects of percussion and of auscultation; one side of the thorax sounds better than the other, whilst the respiration is inaudible, except at the root of the lung, being audible at the side least sonorous. When effusion is added to the pneumothorax, there is dulness of sound on

percussion of the lowest part of the chest, and a fluctuation is heard when the patient changes his posture rapidly. If there be a fistulous communication with the bronchia there is metallic tinkling, or amphoric resonance.

I shall conclude these observations on the chronic diseases of the chest, by stating to you the condition of that cavity and its viscera in cases of extreme

ANGULAR DISTORTION OF THE SPINE.

The respiration being very difficult, the circulation through the lungs is impeded; and in one interesting case of a boy 11 years of age, there was dilatation and slight hypertrophy of the *right* ventricle, the left ventricle being in its normal state. Effusion is apt to take place into the cavities of the pleura, and in the case to which I have alluded, the whole of the *left* lung was so compressed, and so deprived of air, as to sink entirely in water. Respiration had been carried on by the right lung *alone*. The liver was much enlarged from hepatic venous congestion.

It need not surprise us that under such circumstances the face, and especially the lips, be deeply livid, and the dyspnœa extreme, with ascites, anasarca, &c., or that death should sometimes be sudden.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS;
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE.
BY
GEORGE G. SIGMOND, M.D.

ANTIMONY.

ANTIMONY.—*Early history of the metal. Experiments of Paracelsus. Researches of the older authors. Decree forbidding the use of antimony at Paris. Appearances of the native metal; its physical properties. Preparations in the Pharmacopœia. The oxy-sulphuret of antimony. Tartar emetic. Mode of preparing this remedy. Experiments of Rasori. Effects of tartar emetic in high doses.*

GENTLEMEN:—No substance employed in the cure of disease more strikingly exhibits the gradual advance of science than does that of which I am now about to speak to you. Valuable as it now proves to us, it was, at one period, denounced in all the great schools of medical science as a poison, and as the source of the greatest mischief to the human economy. Laborious investigations and repeated trials have now shown to us that, when prepared by the chemist in his laboratory, it is not only to be given without inflicting injury, but with the certainty of obtaining the most beneficial effects. It is now separated from those foreign ingredients with which it was formerly mixed, and is made to unite with other bodies in due and just proportions.

There seems, from the inquiries of classic philosophers, very little doubt that antimony was known in the earlier days of mankind under the name of stibium, and to have been more particularly employed in the formation of a species of cosmetic, which gave beauty to the eyes, and it appears to have formed part of the toilet of Jezabel, who is described as painting her eyes, and the word used is stimmium, which, together with stibium, is more than once thus applied in sacred writ; to Dioscorides and Pliny this method of using it was known under the name of platy ophthalmon and gyraicon; Dioscorides, however, speaks of it not only as a species of collyrium, but as an astringent, a refrigerant, and, likewise, as a caustic; he also speaks of its power of restraining hæmorrhages from the brain.

Some declare it to be the tetragonon of Hippocrates, of which we know little, but as some preparation made into squares by the assistance of the milk of a female, and that it was the "lapis spumæ candidæ, nitentisque, non tamen translucentis" of Pliny; the preparations were the sulphuret and the oxide, which last salt they obtained in an impure state by roasting the sulphuret, which was known to the ancients, and not the metal itself. The custom of painting the eyes with antimony seems to have been at one time universal in the east, and when the Moors were masters of Spain they introduced the habit there.

The Arabians were acquainted with antimony under the name of Atemed, from which its name of antimony is most probably derived, although a story is extant, but not founded on any authority, that Basil Valentine first tried its efficacy upon the monks of the convent of Benedicts at Ertfurt, in Saxony, of which he was a member, and from its destroying a number of them it was called antimoine, hostile to monks; but as the works of this author, and more especially the "Currus Triumphalis Antimonii" only appeared in German, and afterwards in Latin, and in the former language it was called speissglass, there seems to be no probability of its truth. In alchemical works it is called lupus vorax, and saturnus; it was also called plumbum sapientum, magnesia saturnina, lavacrum solis; and you should also be aware that in the writings of the alchemists it is not unfrequently to be found under the name of alcohol, the appellation by which spirit of wine is now so familiar to us. The alchemists were indefatigable in their examination of this metal, and as Fourcroy has observed, they

tormented it in every possible manner, to obtain from it the great object of their zeal and labours,—a universal remedy which was to render man unharmed by disease and immortal.

Paracelsus has, in his wonted extravagant style, praised antimony as the restorer of strength, and a renovator of all the powers of the body; his great boast was his power of curing epilepsy by this medicine; he compares his practice with that of the time of Simon, when the blood of a malefactor who had been beheaded was drunk with success; and after pointing out that from a want of attention to the concurrence of seasons, and the influence of the stars, more were killed by physicians than cured, he launches forth in his praises of the power of antimony, and asks who would be dissuaded from its use, who would not vehemently love it, who would despise such a discovery, and who would reject it, as did the physicians of the day, because it was not to be found in Libris et Lyra Galenica.

The school of Paracelsus followed their master, and many individuals who have been handed down to us as promoters of chemical medicines, have written upon its use, and a library of a very curious character might be collected of volumes written upon this subject; the most remarkable are Penotus Rolfinkius, Hildanus Fabricius, Poppius, Grævinus, Stenglius. I once took a fancy to gather together these authors, having some little fancy at that period for alchemy, and more extravgant notions, mixed with much learning, could scarcely have emanated from the wildest speculators than I found amongst them. Still there is much to learn from these old authors, and you will very frequently find many modern inventions, as they are called, fairly described, and accurate woodcuts given of the mechanical means used by them, which do not differ much from those of the present day. These enthusiasts were strongly opposed by the slow and probably prejudiced members of the great schools of medicine, and a most bitter and fierce war was waged against antimony.

In July 1566 a decree of the Faculty of Physicians of Paris appeared, forbidding any of the members to employ any preparation of this metal, and they actually had the power, and the bigotry, to apply and obtain from the Parliament a strong edict on the same subject; alike in its metallic state, or in its various forms, it was declared to be a virulent poison, which the safety of the public forbade to be employed. In 1609 Besnier, disregarding the denouncement of what he considered to be a valuable medicine, and refusing to promise that he would abandon its administration, was in due form ejected from the faculty of which he was a member. In 1637 the prohibition against it does not seem to have been enforced, for we find that it obtained a situation amongst the class of purgatives; but it was not until the year 1650 that the popular and the medical prejudices were sufficiently abated to allow any public act to remove the former impression against it; at that period, however, a new decree was issued, which restored it to practice, and it has, since that period, like many other drugs, had its periods of great celebrity and of oblivion.

The exaggerated statements of different parties, one who considered antimonial preparations as excellent and important remedies, the other who looked upon it as absolutely poisonous, led the way to a series of investigations which have been most useful. Lemery was the first who gave a correct and rational account of antimony; Mangetus, in his "Bibliotheque Chymique," has collected some most useful treatises; Geoffrey has given several memoirs in the volumes of the Academy; Bergmann, Scheele, Macquer, and Rouelle, have also furnished us with a vast variety of information as well as with processes founded upon practical experience, by which many antimonial remedies have found places in the different pharmacopœias of the civilised world.

Antimony is found in its native state in the earth, and likewise in that of sesquisulphuret of antimony, hydrosulphuret oxide of antimony, and also chloride of antimony. It was first found in the year 1748, by Anthony Schaub, in its native state, in Sweden, and since that it has been discovered in the South of France; from its having occasionally been observed mixed with arsenic, it has been described as an ore, under the name of arsenical ore of antimony. It is of a white pure colour, with some degree of lustre; it has a lamellated texture. It often presents upon its surface very perceptible traces of crystallisation, which wear much of the appearance of vegetation, or of radiation, which has been compared to ferns and to feathers; and when the alchemists, in the midst of their operations, saw this form, they believed that they were about to be successful in their processes, and considered that a favourable omen was to be deduced from it.

The metal is very little liable to tarnish; its specific gravity is 6.702. It is not fused until it is heated to perfect redness; it is not very volatile; it is brittle; it has, when rubbed and exposed to the heat of the hand, perceptible smell and taste. Sesquisulphuret of antimony is the most abundant ore of the metal, and is found in very large quantities in France and in Hungary; it is of a gray metallic colour; it soils the fingers like black chalk. There are many varieties, known to mineralogists according to the arrangement, the external appearance, the volume, the regularity or irregularity of the prisms; thus, we have in the tenth case in the gallery of the British Museum, speci-

mens of compact, foliated, radiated, plumose varieties; there are some splendid groups of crystallised sulphuret of antimony from Transylvania. The hydro-sulphuretted oxide of antimony has been called native kermes, or golden sulphur, which is found in shining filaments, of a deep red colour; this has been artificially imitated by the chemists, and formed a medicine formerly of great celebrity, together with a preparation called sulphur auratum, and which is still known to us, and corresponds to the antimonii oxysulphuretum of our present Pharmacopœia. The muriate of antimony is very little abundant, and claims very little attention from us.

The first preparation of our Pharmacopœia is the oxysulphuret of antimony, which is thus made:—Take of sesquisulphuret of antimony, powdered, seven ounces, solution of potash, four pints, distilled water, two gallons, diluted sulphuric acid, as much as may be sufficient. Mix the sesquisulphuret of antimony, solution of potash, and water, together, and boil with a slow fire for two hours, frequently stirring, distilled water being often added, that it may fill about the same measure. Strain the liquor, and gradually drop into it as much diluted sulphuric acid as may be sufficient to throw down the oxysulphuret of antimony; then wash away the sulphate of potash with water, and dry what remains with a gentle heat.

In order to detect the presence of either lead or copper, which might exist in the sesquisulphuret of antimony, the tests that are furnished us are,—with heat it is entirely dissolved by hydrochloric acid; from the acid in which it is boiled a white precipitate is thrown down, by distilled water; from the strained liquor, hydrosulphuric acid afterwards throws down a reddish-coloured substance. When obtained in the manner I have just described, this salt wears the appearance of a bright orange colour; its taste is slightly styptic. It is insoluble in water.

It would be useless for me to attempt to give you even a very brief outline of the history and the processes of the different preparations of antimony, which have given rise to the one to which I have just directed your attention, or to the others which were formerly known. Some of them, which in their day attracted the greatest attention, which were kept for some time a great secret, and were at length purchased at an enormous price by the government of France, are now almost forgotten, and there seems to be an immense number of different hydrosulphureted oxides of antimony, varying in the proportion of their principles, according to a vast variety of circumstances which have attended their formation, and have led even such accomplished chemists as Bergmann into contradictions and into errors which have been the subject of controversy, and have been strongly animadverted upon by Fourcroy, by Berthollet, by Thenard, and by others.

The preparation which is of real value to us, and has long been very highly estimated, is the common tartar emetic, as it was long called, and which is now known to us by the name of antimonii potassio tartras, this is a compound of tartaric acid, of potash, and of sesquioxide of antimony. In the year 1631 it was first made known on the Continent, by Adrian de Mynsicht, and a work published by him, called "Thesaurius Medico Chemicus," contains the first account of this preparation. He was one of the adepts, and at the conclusion of his work he gives his testament upon the philosopher's stone. Dr. Paris thinks that the idea may have been suggested to him by a powder which had been much used in Italy, and whose preparation was known to Dudley, Earl of Warwick, consisting of scammony, of sulphuret of antimony, and of tartar, triturated together, and the recipe for which appears in a work published by Cornachinus. It is at the present day thus directed to be made:—Take of sequisulphuret of antimony, rubbed to powder, nitrate of potash, powdered, each two pounds; bitartrate of potash, powdered, fourteen ounces; hydrochloric acid, four fluid ounces; distilled water, a gallon. Mix the sesquisulphuret of antimony accurately with the nitrate of potash, the hydrochloric acid being then added, and the powder spread upon an iron plate, ignite it. Rub what remains to a very fine powder, when it is cold, and wash it with boiling water, until it is free from taste. Mix the powder thus prepared with the bitartrate of potash, and boil for half an hour in a gallon of distilled water; strain the liquor while yet hot, and set it aside that crystals may be formed. These being removed and dried, let the liquor again evaporate, that it may yield crystals. This approaches in composition to the crocus antimonii of former pharmacopœias, which derived its name from its deep orange-red colour. A great number of antimonial preparations were known which were made by the union of nitrate of potash with the metal: the diaphoretic antimony, by the regulus; the solvent of Rotrou, or diaphoretic antimony, not washed; the washed diaphoretic antimony; the ceruss of antimony, or pearly matter of Kerkoingius; the liver of antimony; the nitrum stibratum; all were formed of this union in different proportions; the only one now remaining to us is that which I have just mentioned, and the wine of that salt, which is made by dissolving two scruples of the potassio tartrate of antimony in a pint of sherry wine. This salt is entirely soluble in water, no bitartrate of potash remaining in the vessel; and hydrosulphuric acid

being added, a reddish coloured precipitate is obtained, which is the red hydrated sesquisulphuret of antimony. Chloride of barium and nitrate of silver being added to the solution, and nothing being thrown down, is demonstrative proof that neither sulphuric nor hydrochloric acids, nor their salts are present. Nitric acid throws down oxide of antimony, but an excess of it again restores it to its state of solution. The general character of the crystals is that of an octahedron, with a rhombic base; they are colourless and inodorous, but as generally found in the shops, it is in the form of a powder, approaching to a pale yellow colour, having a styptic, metallic, and slightly acid taste.

This salt is decomposed by a great number of organic compounds, and should not be prescribed with any of the vegetable substances that contain tannin; decoctions of cinchona, of catechu, and of most of the astringent bitters, very quickly act upon it, and render it perfectly inert. Dr. Turner has examined this subject with great care and attention; and in the 28th volume of the "Edinburgh Medical and Surgical Journal," you will find the result of his observations in a paper, entitled, "On the Detection of Antimony in mixed Fluids." The alkalies and their carbonates should not be added to a solution of tartar emetic, nor should lime-water, chloride of calcium, nor the acetates of lead. Orfila, Dr. O'Shaughnessy, have made experiments on the best tests for antimonial salts, which are very important, as relates to that branch of toxicology embraced under the head of medical jurisprudence.

When tartar emetic was first made known to the public, doses of very great magnitude appear to have been fearlessly given, and the excessive purging and vomiting that followed upon its use was supposed to be of very great value in promoting the crisis, which in those days was looked forward to in every disease, but in fevers more especially, with the utmost anxiety; but in later years the doses have been more judiciously graduated, and one or two grains have been thought sufficient to administer in any case where this effect was desirable; but the Italians have within a very few years introduced a practice which has been followed not altogether unsuccessfully in France, and even in England, of prescribing eighteen or twenty grains.

Professor Rasori, of Milan, is supposed to be the first who gave us any information on the subject, and his views were taken up by Laennec, who put them to the test of experience, and he has nearly confirmed them; others have met with similar results, though now and then we have given to us some useful hints not to make too free with a remedy which, judiciously administered, is a boon and a blessing, but which, beyond a doubt, has most energetic influence upon the human frame; an intermediate dose, that is, from four to eight grains, has certainly been more poisonous than two or fourteen.

Orfila narrates an instance in which a man took, instead of cream of tartar, a scruple of tartar emetic; pain in the stomach, a sensation of fainting, and a bilious vomiting, very soon after came on; to these feelings were quickly added violent pain in the bowels, then profuse and unceasing diarrhœa; the pulse became small and contracted, the strength was diminished, and the most distressing cramps came on. He remained in this state for upwards of six hours, but recovered by the judicious administration of bark and of opium, but much time elapsed before his digestive organs had completely recovered their lost tone.

M. Recamier relates an instance where he was called in upon the third day, after the patient had taken forty grains; he had during that time suffered from vomiting, purging, and convulsions. Even the external application of the tartarised antimony to a denuded surface, in large quantities, has caused serious symptoms, and sometimes death. A case is recorded in the "Archives," which proved fatal; a young girl, under twenty years of age, was in the Hopital Necker, under the care of M. Bricheteau, who ordered for her a plaster, the surface of which was sprinkled with half a drachm of tartar emetic, which was applied to the epigastrium, where some leeches had been lately employed, and where their bites were not healed. In the course of a couple of days a deep eschar was formed, the subjacent cellular tissue was rapidly destroyed, and the recti muscles laid bare; much febrile irritation was excited, aphthæ appeared in the mouth, and the parotids became immensely swelled, and the poor girl died. On examination after death, the whole of the cavity of the mouth was found studded with aphthæ; the inner surface of the small intestines presented considerable puffiness, and the ulcer in the epigastrium extended deep, to the posterior surface of the recti muscles.

There is a case in the "Medical Repository" of an infant, two years old, who died after forty-eight hours, from the friction of the spine, with the ointment of tartar emetic, after great sickness and frequent fainting, so that the external application is not to be considered free from danger. Six grains have produced very severe effects. Dr. Christison quotes a case of this kind from the "Bulletin des Sciences Medicales;" a woman swallowed this quantity wrapped in paper; she was seized *with violent vomiting in half an hour*, which soon became bloody. In two hours the decoction of cinchona was administered with

much relief, but she had severe colic, diarrhœa, pain in the stomach, and some fever, of which symptoms she was not completely cured for five days. There is another very curious case, which is worth your attention, where, probably, the inactivity of the poison may be supposed to have been influenced by the narcotic effects of the fumes of charcoal. A man, whilst in a state of health, swallowed seventeen grains, and then tried to suffocate himself with the fumes of burning charcoal. He recovered, though not without suffering severely from the charcoal fumes, but he could hardly be said to have been affected by the tartar emetic.

Although to Rasori and Thommasini has generally been ascribed the introduction of the large doses, yet this plan of curing fevers had been long known in this country, and it was but a revival of the practice of the older physicians. Dr. Marryatt of Bristol has, in his work on therapeutics, the last edition of which he published about 1790, this passage,—"Any fever may soon be extinguished by the use of the following powders:—Take of antimony, five grains, white sugar, or nitre, a drachm; let them be well rubbed in a glass mortar, and divided in six powders, one to be taken every three hours, and notwithstanding the nausea the first may possibly occasion. If they bring on a diarrhœa they should still be continued, and it will soon cease. If these are taken, which is most commonly the case, without any manifest inconvenience, let there be seven grains in the next six powders, and in the next ten. Here I beg leave to retract what I said in some former editions of this work, viz., that till sickness and vomiting was excited this noble medicine was not to be depended on; for I have seen many instances wherein a paper has been given every three hours, of which there have been ten grains in six powders, without the least sensible operation, either by sickness, stool, sweat, or urine, and although the patients have been unremittedly delirious for more than a week, with subsultus tendinum, and all the appearances of hastening death, they have perfectly recovered without any medicinal aid, a clyster every other day excepted. I have lately seen a great many cases similar to the above, and the tartarised antimony has invariably produced the same effect."

The practice of giving large doses of tartar emetic in cases of acute inflammation, soon made its way in the most prominent of the medical establishments of Europe, from the confirmation of Rasori's experiments by Laennec, who treated several cases in the Clinique of La Charité on the same plan, though he did not in pneumonia entirely trust to it, but likewise had recourse to moderate bloodletting. We are indebted to his pupil, Dr. Delagarde, for the result of Laennec's practice. Instead of adopting entirely the system of Rasori, who commenced with doses of twenty-four grains of the tartrate of antimony in twenty-four hours, he began with four or six grains dissolved in four or six half-glasses full of orange flower water, well sweetened, gradually increasing the dose under such regulations as the state of the individual might require; half a glass-full was given every two hours. The first dose generally causes evacuations either by the stomach or the bowels, and frequently the second dose checks them, or if not the third or fourth; if excessive evacuations arise the doses are to be discontinued. On the second day, if no ill effect has arisen, and no untoward symptoms of any description have presented themselves, the quantity of the antimony may safely be increased; if any mischievous sign occurs syrup of poppies may be added to the solution. When the patient has once found that no bad symptom arises, and that he is capable of bearing the remedy, the doses of the medicine may be increased to a very great extent without any inconvenience; but there is a limit at which a trifling addition can no longer be borne, and it must then be at once discontinued. This plan was pursued together with occasional venesection, in acute pneumonia, in acute rheumatism, in acute hydrocephalus, and also in apoplexy and in chorea. This practice differs so far from that of Rasori, that it does not consist in treating pneumonia from the commencement to the termination of the disease with this medicine alone, nor make it almost the only remedy, nor discard altogether bloodletting, nor does it give doses quite so large as the Milan physicians have given it. In England several of our practitioners have followed the principles of the Italians, and about the year 1825 our journals will be found to contain ample proofs of the willingness of our profession to give a fair trial of everything that comes to us well recommended by our medical brethren on the Continent.

I must, however, state my conviction that, as a general and fundamental doctrine, small doses of antimonial medicines are far preferable, and that bloodletting is the much more commonly received practice of the present day, and that in the greater number of cases there would be more to be apprehended than to be gained from the employment of means which do not carry with them that certainty of safety and success which the ordinary mode of treatment most decidedly does. That there may be certain morbid states of system in which doses of medicine may be taken with great impunity there is very little doubt, and that when that morbid state ceases the power of taking the large quantities is also removed, I may be willing to admit, but how is a judgment to be formed of the precise moment at which the constitution is saturated with the remedy, and the slightest increase, it would appear,

is then attended with some degree of danger. The diathesis which bears these enormous quantities of this remedy, has been much dwelt upon, but it has not as yet been pointed out to us, so that we have by no means any just data to act upon. There is too much sacredness attached to human life to allow us to trifle with it, although in diseases which quickly run their career, and would terminate unfavourably, we may arrest them with boldness, still, until we are thoroughly masters of the power of each remedy, we must hesitate and well weigh every circumstance. The cessation of the power of the constitution any longer to bear the smallest quantity of the antimonial remedy is marked by excessive loathing and disgust, and occasionally by most severe symptoms; and this supervenes most suddenly, without giving any previous warning, and just after large quantities have been swallowed not only without the slightest inconvenience, but with the greatest benefit. The views of Laennec are not precisely similar to those of Rasori on the subject of endurance; he finds it to diminish, but not, as the latter does, to cease altogether. Dr. Christison says he has certainly seen from six to twenty grains, when given daily in several doses of one or two grains, check bad cases of peripneumony and bronchitis, without causing vomiting or diarrhœa, and also without increasing the perspiration. At the same time he has twice seen the first two or three doses excite so violent a purging and pain in the stomach and whole bowels, that he was deterred from persevering with the remedy. He has never witnessed any good result from this treatment in the continued fever of Edinburgh, but he has repeatedly found that these doses did not in that disease cause any symptoms of irritation in the stomach and intestines.

From what I myself have seen, I should prefer giving the very large doses to the intermediate ones; I have known four and six grains on two several occasions produce vomiting, diarrhœa, and great depression of strength; indeed, I do not know whether I might not attribute a fatal consequence to the remedy rather than to the disease in one case which, however, would, beyond a doubt, have ultimately destroyed the patient. The very large doses I have seen administered in Italy, but I was by no means satisfied either with the practice or with the carelessness with which it was exhibited. It decidedly did no mischief, but other means would have been quite as certain of relieving. It is likewise always to be borne in mind that difference of constitution, of climate, of habits of life, must always very much influence the activity of each remedy, and there are many medicines which are most advantageously employed on the Continent, which would not only fail to do good but might be productive of mischief here; and the dose that I should recommend of this remedy would be half a grain to prove active upon the bowels, and to produce perspiration, and one grain to obtain its emetic effects. But there are states of the constitution in which larger or smaller doses may be found to be most advisable, and these will often require the sagacity and the experience of careful and thoughtful men.

ON THE STATE OF

MEDICINE AND SURGERY IN SPAIN.

By J. PARKIN, *Esq., London.*†

(Continued from page 224.)

SOMEWHAT unmeasured terms have been used recently in writing on the state of medicine and surgery in Spain. With respect to the latter, there can be no doubt that it is at somewhat a low ebb, especially in particular provinces, and in the agricultural districts, as also among the old surgeons of the army. But in the large towns, where the pure surgeons of the first class are to be found, such is, assuredly, not the case. My friend Dr. Fran, professor of anatomy and surgery in Barcelona, would yield the palm to few individuals of any country for anatomical knowledge, and skill and dexterity in the performance of all the principal operations in surgery. The same may be said of Dr. Argumasa, of Madrid, and several others. As regards the army surgeons, as these appointments are now filled up by the newly-created class of practitioners, no complaints will, I am sure, be made in future respecting their qualifications; for I will take upon myself to say that the rising generation of general practitioners is not only a credit to their own country, but would also do credit to any school, whether French or English, for they are well informed, well instructed, and good anatomists, and cannot fail, therefore, to perform the duties which will be intrusted to them in a manner alike honourable to themselves and to the profession to which they belong. Not that I mean to infer that this desirable result has been brought about simply by the formation of the new class of surgeon-physicians, for the same event would, doubtless, have been witnessed had the law stood as it was before, although, perhaps, not to the same extent. As the colleges for the instruction of the new class of practitioners were erected lately, they have necessarily made many improvements upon the old plan of teaching, and are conducted more in the spirit of the present age; and upon the plans adopted in the best schools of Eng-

† The title "late surgeon in the British Legion," was appended by mistake, to Mr. Parkin's name in our last number,—Mr. Perkins never served in the British Legion.—ED. L.

land and France. That in Madrid is a very elegant and splendid establishment, the lecture and dissecting-rooms being equal to the best of the same kind in London; while I can bear ample testimony to the ability, learning, and eloquence of the several professors. There is, also, a most excellent and well conducted Clinical Hospital for the instruction of the pupils, and in which they are allowed to attend patients under the immediate eye of the medical attendants. It is also probable that the extended course of instruction enjoined on the new class of practitioners, will make them, at their onset, more capable of undertaking the duties which devolve upon them, than the physician or surgeon; for, although there can be no doubt that division of the practice of medicine is favourable to its advancement, it is, in my opinion, no less certain that the study of the whole is necessary to perfection in any particular branch. If so, students of every class, excepting only those of pharmacy, ought to be obliged to pursue the same preliminary studies; for, otherwise many, through idleness, or want of thought, would assuredly leave unexplored the greater part of the field of medical science, and confine themselves to their own particular path, regardless of the assistance and hints to be derived from the cultivators of other and different soils; for if it be true that the accessory sciences are useful to medicine, how much more must a thorough knowledge of the different parts of the same science be valuable to him who is anxious to excel in one particular branch.

To this single circumstance may be ascribed, in fact, the difference in the state of surgery in England and France, and Spain, although more, doubtless, is to be attributed to the blighting influence of despotism and priestcraft; for as medical men in the latter country have, from their increased knowledge, when compared with the other classes of the community, been no friends to despotism, and have always been foremost in the ranks, when any effort was to be made for the emancipation of their country, they have seldom had much encouragement from the Government or influential classes; but, on the contrary, have been, too often, the victims of persecution and oppression. It was not until after the death of Ferdinand, when the political institutions of the country became changed, and when reform, even in medicine, was no longer regarded as a crime, that the profession in Spain were enabled to set about making those changes which were required by the progress of civilisation, and the advancement of knowledge. Besides this, it should be remembered that Spain is now a poor country, and that, consequently, the same premium has not been offered for cultivating the medical sciences as in France and England; for without good or sufficient pay, there will be few cultivators in that or any other vineyard; or, at the least, few zealous ones. Now, it should be remembered that both medicine and surgery have made the greatest advance within the last fifty years,—the precise period in which Spain has been plunged into the most abject state of despotism, poverty, and anarchy. It is no wonder, therefore, that the Spanish sons of Esculapius should be somewhat behind their brethren in other and more favoured parts of the world. But they are now making rapid strides towards perfection, and will ere long, if I mistake not, overtake their more fortunate and advanced competitors. That they were not behind us in former periods, I shall, perhaps, take an opportunity of showing on another and future occasion.

As regards medicine, it is, I am happy to say, in a more advanced state than its sister branch, surgery, although still removed several degrees from the perfection to which it has arrived in England. The difference, however, is in many instances extremely small, and it is to be ascribed more, perhaps, to difference of climate than any other cause; for it is a truth I had ample opportunities of verifying, from personal observation and experience, that the diseases of Spain are less acute and less complicated than those in this country, while, also, they yield to more simple and less energetic measures. Difference of climate ought always to be taken into account, while comparing the practice of foreigners with our own; for there can be no doubt that the treatment which can be borne with impunity, or which is even required, by the natives of England, would be injurious to those of Spain; while the mild and simple measures adopted by the latter, would be inert and useless if trusted to for the cure of the same complaint in this country. Even in Spain there is a great difference in the treatment of the same diseases in the south and in the north; in Andalusia, for instance, and in Catalonia; the practice of the latter province assimilating very much to that of England, while that in the former is more French, or, rather, that recommended by Broussais. The reason is clear. In the central and southern provinces of Spain the diseases assume a simple form, the different varieties of fever being the principal and almost only complaints witnessed. In summer, inflammation of the mucous membrane of the bowels, and, in the autumn, inflammatory affections of the lungs, or congestion in the liver and other abdominal organs, are also observed. With the exception of ague, which often assumes the malignant form, and which, of course, requires a peculiar mode of treatment, the complaints enumerated above do not assume a very acute form, and are, therefore, found to be amenable to simple therapeutical means. A few leeches to the anus or other part of the body; the administration of a few

common diaphoretics, and cooling drinks, are generally found sufficient to effect a cure; and I have often been surprised to see how readily these simple means arrested the progress of the disease. It is no wonder, then, that the greater number of practitioners in the southern and central parts of Spain are disciples of Broussais, or, at least, followers to a great extent of the plan of treatment recommended by this celebrated physician. But the case is widely different in Catalonia. Here disease assumes a more proteian form, the different fevers being not only more complicated, but attended with affections of the great internal organs; and are, therefore, less amenable to therapeutical means. Independently of inflammations of the chest and abdomen, affections of the head, and determination of blood to this organ, are very prevalent. In Masare apoplexy is almost endemic, or, rather, I should say, epidemic, as it prevails most at particular periods. A different mode of treatment, therefore, and more energetic measures are required in Catalonia, than in Andalusia, or Valencia; hence it is that, comparatively speaking, Broussais has few followers in that province, for his mode of treatment would never answer, when trusted to *alone* in acute fevers, complicated with severe affections of the great internal organs. This shows that if the medical men in one part of the world adopt a more complicated and more scientific method of treatment, it is often to be ascribed to the simple circumstance, that disease in that particular country assumes a more complicated form, and is more difficult of cure than in others, where a simple method of treatment is trusted to. As, also, there can be no doubt that in England diseases are more numerous, more complicated, and affect the great internal and vital organs more particularly than in Spain, even when the northern provinces are the subject of comparison, much more the southern, we have necessarily been obliged, from time immemorial, to adopt a more energetic, active, and varied method in the treatment of disease; and as we have thus been obliged to make use of more weapons than our neighbours, we have also, it is probable, been forced to acquire more skill in the use of them, in order that they might not become, in our hands, instruments of harm instead of good. In difficult and complicated cases, therefore, it is to be presumed that we should have more means at our command than some of our neighbours, and that, in such instances, we should also be more successful. Such I should consider a case narrated by Mr. Lambton in THE LANCET; for however common the complaint may have been among the British, typhus is very uncommon among the natives. In proof of this, I have only to mention that when the British Legion was suffering so severely from typhus fever in Vittoria, I did not observe a single case in the Spanish hospitals during the short visit I made to that city; while I was informed by the army physicians that the native troops continued perfectly healthy. In estimating, therefore, the comparative merits of the practice of different countries,—at all times an invidious, and sometimes a difficult proceeding,—those different circumstances ought always to be borne in mind, otherwise we shall be condemning unjustly the scientific attainments of those whom we ought to respect and admire.

Another circumstance ought also to be borne in mind, viz., that in all countries there are good and bad practitioners, scientific and unscientific ones, and that unless an individual has had extensive opportunities of judging of the merits of a particular body of men, his opinion, when formed only from the attainments of a few individuals, is likely to be an erroneous and unjust one.

I trust that the preceding sketch of the state of medicine in Spain may tend to establish correct impressions on the subject, and hope, also, that a sense of the obligations which I owe to the profession in that country may not have induced me to look with a partial eye on their acquirements and professional qualifications.

MECHANICAL CURE OF CLUB FOOT.

To the Editor of THE LANCET.

SIR:—In your leading article of No. 19 for the present year, are some interesting remarks on the cure of club-foot by division of the tendo Achillis. Having had several cases under my care, in which I have effected a radical cure solely by using mechanical means, and as it appears to me, from the tenor of some of your remarks, that circumstances may not always be in favour of resorting to a surgical operation, I think that you will agree with me, that it is desirable to be acquainted with any resource which has been practised with success, particularly as it may happen, that constitutional peculiarity on the part of the patient, repugnance of parents, &c., or a conscientious preference, arising from any other causes, of treatment by mechanical means on the part of the professional adviser,—each, or all these considerations, may militate against its adoption. I am supported by the experience of Mr. Chapman, formerly house-surgeon of St. Bartholomew's Hospital, whose attention has been particularly directed to the mechanics of surgery, and who has made use of my instruments alone in several cases, and subsequent to the operation, in one case, with perfect success.

The case in which Mr. Chapman applied my instrument after division of the tendon, is that of a male child two years and a half old, who had congenital varus internus of

both feet, both exceedingly malformed; but one, as I have generally observed, was much worse than the other, the left foot in this case being more deformed than its fellow. Both feet were for some time submitted to the effects of my instruments only; but the progress of the cure being much more rapid and satisfactory on the right foot than on the left, the tendon of the left foot only has been divided, in order to expedite the cure on that side. It may not be amiss to state here, that in all the cases placed under my care where both feet were affected, one has yielded much more readily than the other; but that a steady perseverance in the use of the same means has hitherto been successful in overcoming that difficulty, at the expense of a little more time and attention. It seems singular enough, that although my attention has been directed for the last twenty years to distortions, malformations, and, in fact, the invention and construction of mechanical aids for surgical cases requiring their use, no opportunity occurred of trying what I could effect in these cases (club-foot) until June 1835, when having, a short time previous, succeeded in producing several kinds of mechanical palliatives for vesico-vaginal fistula for numerous patients of the late Mr. Earle, in St. Bartholomew's Hospital, which answered their intended purpose, after operating had proved unavailing, he desired me to turn my attention to this subject, and soon after placed a case of congenital varus internus of both feet under my care.

The patient, a male child fifteen months old (the only son of Col. H. of the Hon. E. I. Company's service), had just arrived from India when I first saw him. He was a particularly large child, very fat, but of good general health; very lively and active, so far as he could be, and very good tempered, except when his feet became the subject of attention, but with respect to them, he was exceedingly sensitive and irritable, so much so, that we were obliged to have recourse to opiates on attempting to take plaster moulds of them, but without avail, being obliged, after many fruitless attempts which occupied some hours, to resort to force to attain our object. The malformation in this case was greater than in any other which has come under my notice.

When the child was sitting, the feet remaining pendant, the soles of the feet were vertical, in a line with the tibia, the outward margin of the foot downwards, the toes crossing each other, and the whole of the toes being pulled forcibly upwards with respect to the inner margins of the feet, and backwards or under the sole towards the heel, thus forming a compound arch of a peculiar kind. In this case, contrary to what I have generally found, the right foot was much the worst, both in form and rigidity, but neither were flexible in any great degree, as is sometimes fortunately the case. The drawings are faithful delineations of their original state. *A* is the left and *B* the right foot, and *a* is the left foot and *b* the right, correctly drawn from casts taken

twelve months after the means which I am about to relate were first put into operation on the parts. A little reflection convinced me that the only hope of ultimate success depended first upon fixing the foot so firmly in some contrivance that it could not be easily displaced, or allow the foot to turn round within it, when the auxiliary parts of the instrument were brought into action; and this I felt satisfied, from experience in other matters, would never be effected by leathern straps passing over them, however numerous or complicated. I therefore determined on making a kind of shoe of thin plate steel, which should embrace the foot so as to leave only the toes and heel of the foot visible. This I did as follows:—I constructed foot-plates of nearly the natural size and figure, under the foot, bent up at one side for the outer margin of the foot to press against, and this side was continuous, projecting rather higher than the ankle, and a little beyond it backwards. At this latter point, a vertical hinge-joint was fixed, having a continuous narrow ribbon of steel projecting about three inches in length from it. This piece, when bent into its proper form, passed horizontally round and firmly embraced the tendo Achillis above the heel. The next steel plate being constructed of a form and size to cover accurately the inner margin and whole of the upper surface of the foot, taking care not to impede the motion at the ankle, and leaving only the tips

of the toes visible, was then firmly hinge-jointed to the edge of the plate, passing under the foot at its inner edge, so that the upper plate was quite out of the way whilst placing the sole of the foot and the toes upon the foot-plate, and when they were in a proper position could be thrown over the top of the foot, and firmly fixed in an instant by one strap passing through the angular bend of the foot-plate, just behind the little toe, and which, passing over the top plate, fixed on to a stud on the opposite side. About an inch above the hinge-joint, at the sole, the narrow jointed piece being now passed round the tendo Achillis, and similarly fastened to the same stud, I found the arrangement quite satisfactory in preventing the foot from either sudden or gradual displacement within the shoe. Second, that the auxiliary parts, which pass of course up the side of the limb, ought to be so contrived, that a certain portion should be capable of application to the malformed parts when in a quiescent state; the remainder of the instrument, up to the hip, still occupying its proper position along the side of the leg and thigh, and being possessed of joints at the knee and hip, might be joined to a band of steel going round, and fitting the pelvis pretty accurately. The necessity of carrying the instrument so high, &c., may not, at first, be clearly apparent; but as there is a rotating motion from the hip downwards, by which the foot, in a healthy state, can be turned inwards or outwards, I found it indispensable to make this my fixed point of resistance to the occurrence of that motion inwardly, particularly as the steady operation of the powers to be brought into action on the malformed parts depended entirely on those parts of the instrument which passed up on the outside of the leg and thigh, retaining firmly their proper places, and yielding the necessary quantum of counter-resistance to the muscular contraction, &c., by which the toes and foot were drawn inwards. At the lower end of this fixed leg portion, therefore, and as close to the joint of the ankle as possible, a vertical joint, turning on a pivot, was fixed, the lower end of which formed part of a second joint, acting horizontally at right angles with the vertical one; the other part of this joint being in a second piece of flat steel, corresponding nearly in length and figure upwards to the fixed one, passing up the side of the leg, (both having a piece projecting backwards a couple of inches at right angles to their length, placed a little below the knee, and provided with a long, narrow opening across their ends, through which a strong strap can be passed,) and half an inch below this horizontal joint the usual kind of instrumental ankle-joint was fixed; and on the horizontal part of this ankle-joint the steel shoe parts were firmly rivetted in a proper direction through that part of the steel plate passing under the sole of the foot.

The action of the mechanical ankle-joint is of course well understood; the action of the vertical joint is to allow the whole of the foot, and the second upright leg apparatus to rotate inwards, until the whole of those parts are at right angles to their proper position; but the sole of the foot-plate still remains horizontal, and the sole of the malformed foot is vertical. Now, bring the horizontal joint into action, and the inner margin of the foot-plate will be thrown upwards, the whole assuming the exact position of the malformed foot. In doing this, the upper part of the second leg apparatus is projected outward and forward some inches from the perpendicular, and becomes a lever of great power, which may be brought to act on the malformed parts with any degree of force at the discretion of the operator, and having one peculiar property, viz., that in the same ratio as the sole of the foot is brought to meet the ground, so is the foot turned outwards towards its proper place. Both actions are governed by the same contrivance, a strap, which is passed through the backward projecting pieces having the slides in them mentioned above, and another strong strap is fixed on the outside of the shoe-plate close to the little toe, which fastens to a stud just under the knee-joint, and which can be easily shortened at pleasure. The intention of this is to counteract the direct vertical force of the gastrocnemii and solæus muscles when the foot is brought more into its proper position; but I have since adopted a contrivance of a spring and tumbler, acting on the ankle-joint of the instrument. This is something similar to the main-spring and tumbler used in the better kind of gun-locks. This is the whole of the apparatus, and although it may seem complicated in description, in practice it is easily applied to the parts; is simple in its action and management, and properly attended to is certain of effecting the desired object, viz., a radical cure of the malformation.

Should my description have failed in conveying a correct idea of the apparatus and its mode of action, I shall be happy to lay before, and explain its parts and their action, to any professional gentleman anxious to acquire a clearer impression thereof, together with casts of cases, in which it has been applied, and of their progress, in testimony of its efficiency. To return to my little patient: everything being in readiness, I applied the apparatus on the 6th of June, 1835, and found that I could command the position of the feet to almost any extent I pleased, but preferred commencing by putting the peculiar powers of the apparatus into operation so gradually from day to day, as to render their action so imperceptible to the patient that no degree of pain should be

produced sufficiently great to make him give spontaneous expression to its existence whenever the action of the instruments on the parts was increased. They were worn night and day, and were only removed once a week under my own superintendance, for the purpose of ablution, and instantly replaced. In the short space of six weeks, such was the improvement gained, that the soles of the feet were nearly parallel with the ground, and the toes pointing nearly in a line with the edge of the tibia; but the muscular contraction, by which the heel is drawn up, did not yield in a corresponding degree during this time. However, he soon attained the power of walking, and his bodily weight, which was very great, co-operated advantageously in assisting to overcome such contraction, and in the month of October following the heels of both feet came fairly to the ground. From this time the greatest difficulty I experienced was in overcoming the incurvation of the inner margin of the feet; but on the 6th of June, being one year from the commencement of my efforts, I had casts taken of his feet in the attitude which they spontaneously assumed when out of the instruments, and the outlines sent (*a* and *b*) are accurate representation of the improvement gained in the above period. At this time his mother, from grateful feelings towards me, did me the honour to show him to Mr. Liston, at the North London Hospital, who expressed his gratification and satisfaction in terms of which I feel justly proud. Another point worthy of attention is, that the muscles of the calves of the legs had both acquired the bulk and vigour which might be expected to be found in a perfectly healthy child of his age and size. All the cases I have yet had have been treated so similar, and with effect so alike, that the history of one will, as it were, do for all; but I must candidly state, that I have had no opportunity of trying what I could thus effect in cases of long standing, the oldest patient I have yet had being only five years of age, but is going on satisfactorily. I am, Sir, your obedient servant,

CHARLES EAGLAND.

11, Bulstrode-street, Manchester-square.
April, 1838.

TUBERCLES.—Tubercles are not more frequently observed in the lungs of persons who die while affected with pulmonary emphysema, or after a very long pulmonary catarrh, than in those who have died of other disorders.—*Louis.*

SCROFULA.—On examining the bodies of 32 children who died in consequence of affections commonly called scrofulous, M. Rufz found tubercles of the lungs in all of them.—*P. H. G.*

CASES OF DISTORTED FEET.

By J. LITTLE, *M.D., London.*

CASE III.*

TALIPES EQUINUS ACQUISITUS VERUS, CONVERTED INTO TALIPES VARUS SPURIUS THROUGH HAVING HAD TO BEAR THE WEIGHT OF THE BODY.

Cause: permanent Spasmodic Contraction of the Muscles of the Calf, and probably of the other so-called Extensors. Aberration of Volition in certain Muscles of the left Arm and Leg.—Cure by Division of the Tendo Achillis.

Feb. 20, 1837. William Slater, aged 15, an inmate of Bethnal-Green workhouse, a boy of stinted growth and sickly appearance. His mother states that he was a healthy child until the age of two years, when he was attacked by typhus fever, during which he had a fit in the night; this, as she states, "was the crisis of the fever," as it then left him, but with the left arm and leg spasmodically contracted. The consequent deformity of the foot has continually increased up to the present time; with the assistance of a stick he is able to walk, although with great difficulty, dragging, as it were, his left leg and body upon the sound leg and arm. Without the stick he can scarcely make a single step, in consequence of treading solely upon that small part of the surface of the outer margin of the foot which covers the inferior extremity of the fifth metatarsal bone. If he attempt to rest a little more of his weight upon the foot, the toes, metatarsus and anterior bones of the tarsus (ossa cuneiformia, os cuboides, and os naviculare), are thrust so much inwards, that the foot then touches the ground, with the greater part of its outer side and its dorsum. (See *fig.* 4.)

The foot is as much extended as possible through contraction of the gastrocnemii (the

Fig. 4.

heel remaining as far from the ground as the entire length of the foot; the metatarsus, therefore, when not pressed inwards by standing, being in a direct line with the

* For case 2, see LANCET, vol. i., 1838, p. 14.

tibia.) The heel cannot be forced down by the weight of the body, nor can the surgeon, with his whole strength, press the toes upwards in the slightest degree. The great toe is shorter than the toe next to it (indeed the end of the foot has the usual truncated appearance of talipes varus), and is almost always standing erect (see *fig.*), or drawn up and down, as if involuntarily; the other toes are also alternately strongly flexed, or extended, although flexion preponderates in them. The dorsum of the foot is more convex from behind forwards than natural, as is usually the case in talipes equinus. The entire foot is much shorter than the sound one; the tibia is, however, of the same length. The muscles of the thigh and leg, and particularly those of the latter, are much wasted. The patient has not the power of bending the ankle in the least; he can, however, slightly raise the outer margin of the foot, which can seldom be done in talipes varus verus; he can flex and extend the toes voluntarily, although, as it is already related, the flexor and extensor muscles are very imperfectly under his control, so often do they act involuntarily; in fact, the attempts to take a model of this leg with plaster of Paris were frustrated, through the trembling of the limb whilst the mass was setting; this trembling was induced by his incompetent efforts to keep the limb quiet; the thigh is rotated outwards, so that the internal malleolus presents almost directly forwards, the external malleolus almost directly backwards. He has an analogous affection of his left arm; the latissimus dorsi, assisted probably by the teres muscles, draws the arm backwards and downwards; the pronator muscles keep the hand almost constantly in a prone state; the flexors of the wrist and those of the fingers keep the hand and fingers flexed; he is, therefore, entirely deprived of the use of the limb, being unable to grasp any object, or to bring the arm forward, except by moving the scapula by means of the proper muscles of that bone.

26. This day I divided the tendo Achillis in the manner adopted by Stromeyer; after placing the patient in a sitting position, by passing an ordinary narrow slightly curved, sharp-pointed bistoury from the inside of the leg above the tendon, between it and the deeper muscles, and the posterior tibial vessels and nerves about a finger's breadth higher up than the malleolus, towards the skin of the opposite side, dividing the tendon, whilst passing the knife over it. The section of the tendon was known to be completed by the snapping sound occasioned by the separation of the severed ends; one single drop of blood was effused. The two small incisions, for the point of the knife had perforated the skin of the opposite side, which does not always occur, even in this method of dividing the tendon,* and which were a little larger than the width of the bistoury, were covered with adhesive plaster, and a circular bandage loosely applied. No attempt was made to draw down the heel, by endeavouring to flex the foot; on the contrary, the leg was laid upon its outer side, upon a pasteboard splint, adapted to the deformed shape of the limb, in order to allow the edges of the small wounds and the extremities of the divided tendon to unite immediately by adhesion. He bore the operation well, complaining of very little pain, being, as well as his mother, surprised at the trifling nature of the operation.

Evening, ten o'clock. Has been very restless; has had no steady sleep; has started often, and been slightly delirious; much or all of which unpleasant train of symptoms is attributable to my injunctions relative to absolute quiet, for he is a very *nervous* boy, not having been attended to. His mother has had three or four visitors crowded in the small room, around a large fire, with tea-drinking, gossiping, &c. He has more frequent chorea-like convulsions of the arm than before the operation, and he says he has slight pains shooting up from the divided part, and occasional catchings of the divided muscles. His bowels have been relieved since the morning; tongue clean; pulse very little quickened; skin not dry.

Ordered the candles and his mother's visitors to be removed from the apartment, and if he do not sleep in two hour's time, to take 20 drops of tincture of opium, which dose to be repeated two hours later, if still necessary.

27. First day after the operation I received an early message, to the effect that he had slept well, and was comfortable in every respect; had not required to take the opiate. I found him afterwards free from pain, and had felt since the operation as if *he could put the heel down*; said he was very well, and desired to be allowed to get up. The foot, which is only loosely secured to the splint, is not so completely extended as before the operation, being drawn up very slightly by the action of the anterior muscles of the leg; the peronei appear also to have raised the outer margin of the foot.

Mutton chop; half a pint of porter daily;

* As respects the method of dividing the tendon, and the knife to be used, the main points to be attended to, besides avoiding the deeper tissues, are to cut the tendon with as little disturbance of the parts and with as small a wound of the integument as possible, to effect which the nature of the knife to be used will depend upon the tact of each particular operator. I have purposely related cases in which I have adopted various ways of operating.

sulph. of quinine, gr. i., thrice a day, in *infus. of roses*.

2nd day. He slept well; continues to feel very comfortable; no pain, although the anterior muscles of the leg, by occasional startings, disturb the divided parts a little; this action of the flexors does not bind the foot upon the leg more than a very few degrees. Pulse soft, though rather quick; tongue whitish, no fur; little thirst; bowels not open to-day; appetite bad.

Ordered to continue mutton chop and porter, and to have an egg, or rice-pudding.

The following day he was much the same, indeed better, for the twitchings of the arm and leg were less frequent; as the bowels were still confined he was ordered to take a dose of castor-oil early next morning.

4th day. The strip of adhesive plaster was removed from the little wounds to-day; one was found closed, the other nearly so; agitation of the muscles of the leg brought on by the examination. It is probable that the perfect cicatrisation of the punctures has been retarded by the joint not being left sufficiently at rest; and it is presumable that the ends of the tendon not being in perfect apposition, are not yet united; in every respect he is doing well.

On the 5th day I found the punctures closed, little excoriation alone remaining, when I tried very softly to flex the joint; I felt the upper part of the tendon moved, and when I requested the patient to draw up his heel still higher, *i. e.*, to exert his gastrocnemii, I felt the lower portion move, showing, by both experiments, that the ends were united. Stromeyer's apparatus for extending the intervening lymph between the tendons applied, although the foot is to be left another day before any extension is made. As I did not wish him to dislike the foot-board, I ordered *tinct. of opium* 15 drops, if the irksomeness of the foot-board should keep him awake.

6th day. Cicatrisation complete. He is well, and in excellent spirits, although his mother found it necessary to give him the opiate during the night. Stromeyer's apparatus reapplied, and its parts so arranged as to keep up a slight extension, both of the lymph agglutinating the ends of the tendon, and of the contracted ligaments of the joint.

12th day. He has continued improving in health; the convulsive actions of the arm are subsiding very much, so that he can slightly grasp his knife, which he had not done for years. The foot is now nearly at a right angle with the leg; he has been visited two or three times daily; at each visit the tension of the apparatus has been very slightly increased; if he has complained of pain anywhere, from the pressure of the bandages, or apparatus, it has been loosened, and wadding interposed. A dose of *tr. opii* has been ordered whenever he has complained of pain of a general kind in the foot, not appearing to arise from the pressure of any one band in particular. He was ordered yesterday to try to walk about with Stromeyer's apparatus on. The feeling of treading upon the sole delights him, although it gives him pain about the front of the ankle-joint.

Good Friday, 26th day. The foot is much over the right ankle, so that I have allowed him to walk about in a lace-up boot, having a rod of steel, with screw, acting upon the joint. He walks upon the entire sole, or rather upon the heel, for remaining tenderness of the joint makes him rather timid to press upon the sole. The action of certain muscles, some formerly antagonised, is now apparent; for example, the ball of the great toe is drawn forcibly against the ground, or the bottom of the shoe, when he walks, through the action of the flexor longus pollicis and peroneus longus. During the wearing of the Stromeyerian apparatus, he complained of pain in the skin, &c., composing the ball of the great toe, which shows that those muscles mostly opposed the flexion of the ankle-joint. The combined action of all the peronei raises the outer border of the foot. This case proves that the peroneus longus extends the foot, drawing the great toe downwards and outwards.

May 1 and 8. Has visited me at my house on these two dates. He improves in his gait, although the convulsive affection of his arm causes him to appear to walk awkwardly; he treads entirely upon the sole and heel, and carries the point of the foot straighter than he did. There is at present not the least deformity.

He has since that time often walked with comfort eight or ten miles a day.

CYSTOPLASTY.—M. Jobert lately presented to the Royal Academy of Medicine a female whom he had cured of vesico-vaginal fistula by the following simple operation. The fistula was about an inch in diameter, and the consequence of difficult labour. M. Jobert having refreshed the edges of the fistula, dissected off a flap from the external labium, and united it by suture with the refreshed edges of the sore. The first attempt failed, but the second met with the most complete success.—*French Lancet*.

THE bronchiæ are always healthy in the neighbourhood of unsoftened tubercles.—*Louis*.

TUBERCLES.—Tubercles are not more frequent in persons cut off by chronic inflammation of the bronchiæ of from two to six years duration, than in persons who have died of any other malady without inflammation of the bronchiæ.—*Louis*.

THE LANCET.

London, Saturday, May 19th, 1838.

A REPORT of the *Commissioners for Visiting the University of Aberdeen* contains some recommendations which deserve to be well considered. Particularly the recommendation to her MAJESTY to add £1422 to the annual Crown Grants, which already amount to £1699. For it is very questionable whether there would not be as much propriety in withholding the Royal Grants altogether from the University of Aberdeen, as in doubling their present amount. The first step to be made in educational reform is evidently the recovery of the vast sums now paid to sinecurists, and to the propagation of useless knowledge in the Schools and Universities of the Country. And when these sums are ascertained to be insufficient, it will be time to call upon Parliament to institute Professorships, found Universities, and offer bounties on the dissemination of knowledge. But in this case it may well be doubted whether Aberdeen is the particular locality where the national bounty should first be apportioned. The scanty population of the North of Scotland evidently cannot support an efficient Medical School, and it would probably be as wise to offer a bounty on the production of wheat in the Highlands, as to squander £3000 a year of the nation's money in diverting pupils from other Universities. The Government may endow Professorships in cities where students are numerous, and bring science within the reach of the sons of the humbler classes, as is done in Paris: but it would be extreme folly to leave dense populations unprovided for, merely to kindle luminaries that may shed an unprofitable radiance over the wastes of Scotland. The Commissioners advance a fallacy on this question that does them little credit. "We feel bound," they say, "to "express our conviction that *whatever may* "*be the case in richer countries, it is out of* "*the question to expect that, in a country like* "*Scotland*, the higher branches of learning 'can be widely diffused, and their Professors adequately supported, at present, "without a certain amount of encouragement from the State." Did it not occur to the Commissioners that in England, the "richer country," the number that can never enter the pale of the higher branches of learning, is infinitely greater than in Scotland? And with what grace can they contend for the more urgent necessities of Scotland, after having stated that it has hitherto been one of the characteristic features of the Universities of Scotland "that "they have placed the means of a liberal "education within the reach of a large portion of the humbler classes of Society"? "How few," exclaims Professor FORBES, a witness whom they examined, "for instance, "have the benefit of a University education "in England, in proportion to the popula"tion, compared with those in Scotland, "who have that advantage?"

But leaving the University of Aberdeen in the undisturbed possession of grants to the amount of £1699 a year, from the National Treasury, let us see whether a more useful distribution of these grants will not meet all the exigencies of the case. The Commissioners were directed to inquire as to "the "necessity of granting endowments to any "new Professorships that might be instituted, and as to the best mode of pro"viding for such endowments *from the ex*"*isting funds and property of the said Uni*"*versities*, or otherwise." Here the Commissioners have greatly erred: they have looked for endowments exclusively from the National Treasury, and not from "the existing funds of the Universities." The emoluments, in 1836, of the Professors of King's College amounted to £3412 17s.: of Marischall College to £2566 14s. The sources of Revenue in the two Universities are the College Funds, Crown Grants, and Fees:—

1836.	King's College.	Marischall College.
College Funds..	£1215 13 ..	£1082 2
Fees	1048 17 ..	928 5
Crown Grants..	1148 7 ..	556 7
	£3412 17	£2566 14

The partial amalgamation of the two Universities is proposed by the Commissioners; and the principal new Professorships to be founded are on Scottish Law, (instead of Civil), on Anatomy and Physiology, Surgery, Midwifery, Materia Medica, Natural History, and Botany. They propose £1100 as the minimum endowment of the 8 Chairs. The endowments of the Greek, Latin, Mathematical, Philosophical, and Logical Chairs appear to be already adequate.

There are upwards of 100 Medical Students in Aberdeen, the two Universities having found it to their advantage, amidst mutual enmity, to support a medical school which might be capable of meeting (however imperfectly) the requirements of the Halls and Colleges. The Medical Professor in King's College has enjoyed an immemorial sinecure: that venerable "*Medicinæ*" obtained £123 12s. from the College funds, and £87 15s. 3d. from Crown Grants (!), besides fees for Diplomas, in which he drove a very profitable commerce down to 1826. The Professor of Medicine in Marischall College obtaining only £3 a year from the College funds, and £13 17s. from Crown Grants, has been compelled to teach since the trade in Diplomas ceased, and in 1836 received fees amounting to £62 14s. The medical endowments together make £258 a year; which with the endowments of the Law, and Natural History Professorships will make £655 of the £1100 required. Only £445 are unprovided. Now, it appears that £755 10s. of the Crown Grants are absorbed by the Theological Professors, who attract few auditors or fees: the fees of the 7 Professors in the two Colleges amounting (1836) only to £122. Would it not, therefore, be for the public benefit if the Crown diverted the sum of £445 from the Theological Chairs to the Medical and Scientific Professorships, leaving £297, the surplus of the Crown Grants, to be added to the theological endowments from the College Funds? By this arrangement £1052 10s. would remain for Chairs of Divinity.

The Commissioners propose that the regenerated University shall possess 4 Professors of Divinity; one, the Principal, with an annual salary of £550, and 3 with £300 a-year each. To accomplish this project they ask for an addition to the Crown Grants of £172 a-year. The 6 Medical Professors are to have £100 each in the scheme. This is so agreeable to the dark prejudices of the north of Scotland, although it is not calculated to promote the substantial interests of the people, that we must make a remark or two on the inutility of this bounty upon Theological Lecturing.

In the first place, let it be recollected that the Christian Religion is not a Science. CHRIST did not cast his doctrines into a systematic form: nor do they admit the application of experiment, induction, calculation, or generalisation of any kind known in the natural sciences. And a revealed religion admits of no discoveries: its doctrines are complete, unalterable, eternal. It is difficult, therefore, to perceive the utility of State bounties on systematic courses of a religion which admits neither of investigation, improvement, nor addition; and it is easy to see the evils which are likely to flow from the endowment of chairs, where the Professors can only indulge their genius by plunging into error. In Germany the endowed Theological Chairs of the Universities have given birth to endless mysticism and scepticism. STRAUSS has recently written "Das Leben Jesu," to prove that JESUS CHRIST never existed: and has displayed a skill in dialectics and criticism that still baffles the attacks with which the German press teems. If STRAUSS, like PRIESTLEY, had bestowed equal pains on a scientific investigation, his acuteness might have stood him in good stead, and his name might have had as fair a chance of immortality as the discoverer of oxygen. In Scotland, although theological lucubrations may take a different turn when forced by the endowment of Chairs, it is not likely to take in a direction that will be more beneficial to society. While, then, the utmost freedom of teaching is given to the Church of

Scotland, it appears to be highly inexpedient to continue, much less to augment, the Crown Grants to the theological chairs of the Universities: and the inexpediency acquires double force from the fact that the Church of Scotland is not the Church of the great majority of tax-payers on whom the Crown Grants are levied.

Besides, Scotland is the last country in the world where a Government bounty is required to tempt men's minds into the regions of speculative theology. The immortal ridicule of BURNS has not banished from the "Holy Fairs," and Colleges, and strong holds of prejudice in that country, "the twa like sisters twin," "Superstition, and Hypocrisy:" nor is there any probability of their ever being exiled from Scotland, so long as they are supported there at other people's expense.

We have shown, that when Government endows Professorships, Aberdeen is one of the last cities of the empire in which they should be located; that an increase of £1423 on the Crown Grants is unnecessary; and that it will be for the best interests of the Universities of Aberdeen to pay the required sums, from the present Crown Grants, to the Professors of Medicine and general Science, instead of to the Professors of Divinity.

We have some further observations to make when the Commissioners' Report is completed. The necessity for a Union of the Universities of Aberdeen has not diminished since 1826, when a stop was put to the sale of Medical Degrees. The "poverty and not the will" of the Universities had consented to the contraband trade, carried on under ecclesiastical Principals; and the dread of Sir ROBERT PEEL's Commission, to rescue them from crime, dried up the springs of their prosperity. They could not supply the elements of Medical Instruction; and the interests of the public would no longer permit them to gain a subsistence by the illicit distillation of Doctors.

DR. EDWARD HARRISON.

THIS amiable and well known physician died on the 6th instant, aged 72 years, at Marlborough, while on his way to Devizes, to visit a patient. Much against the advice of his friends Dr. Harrison had undertaken the journey from London by a public conveyance. On the road he experienced a very frequent desire to empty the bladder, and the numerous occasions on which he required to alight having drawn from the conductor rebuke, the Doctor, rather than continue to excite remonstrance, or annoy his travelling companions, patiently bore his sufferings until he reached Marlborough, where he immediately retired to bed, and sent for medical aid, a total inability to pass his water having now occurred. The catheter was at once and perseveringly used, but in vain. A few days prior to his death Dr. Serney, the partner of Dr. Harrison, arrived from London, when the comatose symptoms, and the distended state of the bladder, produced grounds for fearing that a rupture of that viscus had taken place, and been followed by a partial reabsorption of the fluid, but the post-mortem examination did not show any lesion whatever of its walls, or much distension of the cavity. The prostate gland was much enlarged, and unnaturally hard. The bladder contained several calculi, and much soft calculous matter, by which the flow of urine through the catheter was prevented in an attempt at evacuation after death. Dr. Harrison had suffered from a calculous affection of the bladder for several years, and within the last two years the accumulation had very much undermined his health, and, it is said, somewhat impaired, by its irritation, the faculties of his mind.

In his last testament the Doctor has bequeathed the additional sum of 3000*l.* to Joseph Underwood, Esq. (a retired and wealthy East India practitioner), and the other trustees, for the time being, of the institution named Harrison's Spinal Infirmary, to be applied by them for the conducting of that establishment on the Doctor's peculiar plan of treating diseases of the spine, an account of which he directs should be recorded and explained by Dr. Serney and other medical gentlemen, who have acted with him, or under his directions, in practice, and adopted as a rule of guidance in the cure of patients in the infirmary. Other institutions have also been bequeathed money in the will, namely, 100*l.* to the University College Hospital, and 100*l.* to each of those institutions that were established by the Doctor at Horncastle, in Lincolnshire. He had also given 100*l.* to a committee of gentlemen, of whom

Mr. Hume, M.P., was at the head, and who now hold the money, to be awarded "as a stimulus for the writing of essays" on medical reform, we believe, but the terms of its appropriation are not understood publicly.

Dr. Harrison was descended from an ancient family in Lancashire. He received a good education, and having chosen medicine as his profession, was sent to Edinburgh to prosecute his studies, where he very diligently employed his talents, and obtained the local honour of election as President of the Royal Medical and Physical Societies of that University. In Edinburgh he took the degree of M.D., and published his thesis "De Opio." From that city he came to London, and became a student under the Hunters; thence he went to Paris, and having completed his medical education, established himself as a practitioner at Horncastle, where he continued for thirty years. The three institutions to which, as having been the founder, he bequeathed 300*l.*, were the Horncastle Dispensary, the Lincolnshire Benevolent Medical Society, and the Horncastle General Book Club." His exertions in the formation of these managed to create for him many undeserved enemies, the common fate of benevolent reformers.

In the year 1817 he came to London, for the purpose of following exclusively his treatment of spinal cases, conducted on mechanical principles, his theory being that distortions of the spine depend in a partial dislocation of the vertebræ, from a relaxed or stretched condition of the ligaments. He treated with success many severe cases, notices of which he has recorded in his "Pathological and Practical Observations on Spinal Diseases." He subsequently introduced to public attention his Infirmary for Spinal Affections, by a gift of 1000*l.*, to which the bequest of 3000*l.* has since been added.

He would have died more wealthy than it appears he has, had he not of late years been very frequently and seriously imposed on by adventurers and needy persons, who contrived to turn his liberality of feeling and opinion to their own account. He was probably more pleased to be considered successfully employed as a physician, and in the promotion of his views and opinions in that capacity, than careful of the pecuniary profits which attended an extensive medical practice.

RICKETS.—Pulmonary tubercles are less frequently observed in children who die of rickets than in those cut off by any other chronic affection.—*P. H. G.*

BONES.—Affections of the osseous tissue in children generally depend on the development of tubercular matter in the interior of their structure.—*P. H. G.*

Illustrations of the Elementary Forms of Disease. By R. CARSWELL, M.D. Fasciculus 12.—INFLAMMATION. London: Longman, 1838.

THIS Number completes Dr. Carswell's work in 12 fasciculi, as originally announced. Expensive publications in separate parts so often fall off, or fall altogether, that the public are grown naturally suspicious, and do not commence purchasing till all the numbers have appeared. We have noticed several of the fasciculi as they came out, and can cordially apply the praises which we bestowed upon individual parts to the whole series of illustrations as they now stand in a perfect form. Dr. Carswell's illustrations should be in the library of every medical practitioner in the kingdom; they present a distinct view of nearly all the pathological changes that take place in the textures of the body, and a knowledge of these changes is the substratum of medicine.

Viewing inflammation in connection with the vascular system, Dr. Carswell considers that all its varieties may be reduced to *primary* and *secondary* forms. The primary forms are,—the ramiform, the capilliform, the uniform, the punctiform, and maculiform. In the first and second of these five forms the blood is accumulated in the arteries and veins; in the third it fills the whole capillary system; in the fourth, the villosities of mucous membranes, or other isolated structures. The maculiform appearance very generally arises from rupture of the capillaries and extravasation. As a general rule, the several degrees of inflammation are expressed by each of these forms in the order in which they have been enumerated, the ramiform indicating the least, the maculiform the greatest degree.

Inflammation is frequently mistaken. The section on its *diagnostic character* contains a valuable analysis of the phenomena with which it is most liable to be confounded. We shall make one extract:—

"*Diagnostic Characters of Inflammation.*—Although the existence of inflammation is, in general, sufficiently characterised by its physical characters, it may be, and frequently is, confounded with other local accumulations of blood, produced during life or after death. A mechanical obstacle to the return of the venous blood; the depending position of organs, or gravitation;

and the transmission of the colouring matter of the blood to neighbouring tissues by imbibition, are circumstances under which the local accumulations of blood, redness and vascularity take place, which require to be distinguished from similar changes produced by inflammation. The differential characters of inflammation and local congestion are founded on certain differences in the physical characters of each, and in the circumstances under which they respectively occur. Although similar forms of redness and vascularity are produced in both, it is perhaps only in mucous membranes that a difficulty arises in distinguishing the one from the other. So long as the redness and vascularity are confined to the capillary vessels, or have their seat in the villous or follicular structure, there can be no doubt as to their inflammatory nature. It is only when they become more general and present the ramiform character, or when this character prevails, that any difficulty arises. This, however, is removed by an examination of the neighbouring veins which, in mechanical congestion, will be found dilated, tortuous, or even varicose, according to the degree and duration of the obstacle by which it has been caused. The congestion of the veins may likewise be traced to its cause; to a tumour compressing them; to disease of the liver, heart, or lungs, which has obstructed the return of the blood through them. In inflammation, the local congestion commences in the capillaries, afterwards extends to the small veins, but never to large branches; in mechanical congestion, the blood accumulates first in the trunks, which are always conspicuous, and afterwards in the branches and capillaries. It is only when mechanical congestion is combined with inflammation that the anatomical diagnosis becomes difficult or impossible. In strangulated hernia and intussusception, we are certain of the existence of both kinds of congestion of the affected portion of intestine from the nature of the causes in operation, viz., compression or stricture on the one hand, and the influence of a morbid stimulus on the other. But when mechanical congestion, produced by a remote cause, is combined with inflammation, it is impossible to detect the existence of this latter disease, or at least to distinguish the one from the other with any degree of certainty. The same may be said of the combination of these two kinds of local congestion, under similar circumstances, in other organs."

Dr. Carswell proposes to publish coloured representations of calculi, entozoa, and monstrosities, when a second edition shall be required. They will form an appendix, and may be obtained by subscribers in possession of the first edition.

ON THE PREPARATION OF ARTICLES OF THE MATERIA MEDICA, WITH A DETAIL OF CERTAIN PROCESSES EMPLOYED BY MR. BATTLEY.

Read at the Royal College of Physicians, Sir HENRY HALFORD, *Bart., President, in the Chair, Monday, the 7th of May*, 1838.

Laboratory, Saunderian Institution, Royal Ophthalmic Hospital, Moorfields, April 28th, 1838.

TO THE PRESIDENT AND FELLOWS OF THE ROYAL COLLEGE OF PHYSICIANS.

GENTLEMEN:—My attention having been directed, during the earlier part of my life, to the practice, and during a long period of time, to the preparation, of medicine, I beg your permission to submit to you the following observations, in the hope that they may not be without effect in the treatment of disease.

The materia medica is presented to the physician by the hand of the pharmaceutical chemist, both in its natural and its artificial state.

The natural takes precedence of the artificial, being the medicine which a merciful Providence gives us to heal our sickness, and to obtain which manipulation need only be employed, as I conceive, to separate the remedial agents from their various admixtures.

The artificial state is the work of chemistry, as usually now conducted, proceeding by effecting the separation of the base of the medicine from the combinations in which it is naturally held.

Far from adopting this view of the subject, it has been my endeavour, generally speaking, to maintain the combination which nature has formed, with few exceptions, when separation b[illegible]es necessary, to effect the recombinati[illegible] the separated matter.

At the outset of modern chemistry the base of a thing so essential to life as atmospheric air was seized upon with avidity; but in its application, as a remedy for disease, vital air has not been found to be even a substitute, much less an improvement on pure atmospheric air, as it is given us in its just proportions by the Divine Artificer.

In the decomposition of the various articles of the materia medica art has succeeded, to a certain extent, with some of the remedies, of which morphine and quinine may be referred to by way of illustration; but it remains to be *proved* whether or no these bases of opium and bark, even when recombined with acids, be equally efficacious as when administered in their native combination, purified and concentrated only, as in the case of bark, or more freely divided, as in the case of opium.

Without impugning, therefore, the science of chemistry in multiplying the number of potent poisons by these separations, some of which cannot stand their ground from the impossibility of adjusting them to a standard sufficiently uniform, or, if adjusted, of controlling their action on the living body with a due regard to its safety, I have arrived at the conclusion that the *desideratum* in pharmaceutical chemistry is:—

To leave unchanged the medicinal quality of the substance acted upon, separating and removing therefrom, as far as may be possible, every matter not possessing remedial virtue; and I may further premise, that I am thoroughly impressed with the belief, that the active medicinal virtues are in their natural state, generally, if not always, held in solution by acids. To obtain this combination undisturbed should be the chief aim and end of the pharmaceutical chemist.

The principal agent applied by me in effecting these important separations is distilled water, generally cold; and I proceed to submit to the attention of the President and Royal College the details of the processes by which some of the various forms of medicine which I have now the honour to submit to their inspection, have been procured.

BARK.

Fine sub-pulverised yellow bark, having been macerated in cold water, yielded a transparent liquid of an amber colour, very fragrant, and extremely bitter, s. g. 1009, a free acid being indicated by litmus paper. By the condensation of this fluid at a low temperature (130°) to the consistence of syrup, a dark and transparent mass resulted, presenting, in the highest degree, all the characters of the cold infusion.

The analysis of this fluid mass gave the following results, viz.:—

Tannin,
Quinine,
Resin,
Bitter extractive,
Colouring matter,
Wax,
Lime,
} held in solution by the vegetable acid peculiar to bark, and yielding aroma in a high degree, the acid also existing in the infusion in a free state,

Together with
Muriate of potash, and
Sulphate of potash.

This first maceration appears to me to have the effect of separating and securing nearly the whole of the medicinal properties of the bark, since, by the second maceration, lime in union with some of the acid, a little colouring matter, and the other properties of the bark in very minute degree, were the only results, and on boiling the residuum in water little was obtained besides starch.

It is sufficiently evident, then, that unless the starch contain medicinal virtue, the first maceration leaves little besides a portion of the vegetable acid, to which that property can be attributed; and with regard to this acid sufficient is procured to hold in solution the quinine, resin, extractive, colouring matter and wax, together with the tannin; and the importance attaching to this process may be considered as fully established when I add, that the acid is a ready solvent of quinine, *even without the assistance of heat*, the usual solvent being dilute *sulphuric* acid at the *boiling point;* and that the bitter procured by the first is far more intense than that produced by the latter, one being the compound prepared in the great laboratory of nature, the other artificial.

I have for some time past received repeated assurances from high medical authority of the superiority of the medicine prepared by cold infusion and subsequent condensation, but I have only recently ascertained the high solvent power of this acid.

SENNA,

To double its weight of cold distilled water, imparted nearly half its own weight. The analysis of this liquor was as follows, viz.:—

Gum,
Resin,
Extractive matter,
Lime,
Alumina,
Magnesia,
} held in solution by a vegetable acid, and yielding aroma in a high degree, the acid also existing in a free state in the cold infusion,

Together with
Sulphate of potash, and
Muriate of potash.

It has appeared to me, as the result of much observation, that the object to be desired in the preparation of senna for medicinal purposes is to retain the whole of these properties in their native combination, and for this purpose the great tendency to separation and precipitation of that which I apprehend to be the most effective property of the drug, viz. the resin, is particularly to be guarded against, for if that effect or consequence be allowed the medicine ceases to be of value.

I find that these constituents are secured with the least disturbance by this method of cold infusion, and that the medicine so procured may be made to preserve its efficacy for a great length of time.

RHUBARB

Requires to be treated in a similar manner to senna.

JALAP

Contains:—

Resin,
Extractive matter,
Starch,
Gum,
Alumina,
Lime,
} held in solution in its peculiar acid, the acid also existing copiously in a free state,

Together with
Muriate of potash, and
Sulphate of potash.

To extract the medicinal properties of this root a high temperature is required, and may be safely used, beginning by cold infusion.

One pound troy yielded extract	6oz.
To which was added by boiling in Papin's digester	4
	oz. 10

In the extract the predominance of free acid is highly remarkable, nearly 2 oz. of alkali being required to neutralise the free acid from one pound of jalap.

CONIUM

Contains:—

Free muriatic acid,
Resinous matter, combining *a highly volatile and very subtle principle*,
Essential oil,
Gum in great abundance,
Colouring matter,
Muriate of potash,
Sulphate of potash.

The active medicinal properties of this plant appear to reside chiefly in the subtle principle above-mentioned.

In the "Medical Gazette" for July, 1831, I stated, that in the ordinary manner of preparing the extract of conium from the expressed juice of the plant, this principle volatilises and escapes at the temperature of 120°; but I am now of opinion that that is an extreme limit, and that volatilisation commences at a still lower temperature. The great care and caution necessary, therefore, in the preparation of the medicine must be obvious, and the admitted uncertainty of its effect under the hand of the physician is explained by the simple fact that a temperature much exceeding 120° is ordinarily employed in its preparation, and hence it too often proves to be powerless.

To secure the resinous matter without decomposing or disturbing the volatile principle, I have adopted the method of heating the juice to a temperature just sufficient to produce the separation of this matter (commencing at about 100°), which, being thus separated, is removed, from time to time, as the separation proceeds. The liquor remaining, and in which muriatic acid is abundant, is evaporated to the consistence of thick syrup, the resinous matter is then admixed therewith, and thus the extract is formed, after which it may be interesting to remark, that several weeks are required to effect the desired reunion of the resinous matter in the manner essential to the efficacy of the medicine, and which reunion I believe to be effected chiefly by the agency of the muriatic acid; however this may be, extract of conium, thus prepared, is a medicine not only of considerable power, but equally to be relied upon with any other medicine duly prepared. It is a medicine *of great power, and is uniform in its operation.*

OPIUM.

This secretion from the poppy-head requires more attention than it is in my power at present to devote to the analytic explanation which its great importance and the complexity of its details require; but I cannot close this paper without observing, that in separating the two antagonist principles which it contains, the stimulant and the sedative, I have, I believe, secured all the principles of the sedative power, in combination with the peculiar acid of the secretion, by which they are held in solution free from any admixture of the stimulant principles.

REMARKS.

Bark yields all its medicinal properties to cold water, a moderate elevation of temperature only being used in its condensation.

Senna and rhubarb yield their medicinal properties without the aid of heat.

Jalap, on the contrary, requires a very high temperature for the complete extraction of its medicinal virtues.

Conium.—The separations required for the purpose of my preparation of this medicine are effected at a low degree of heat, and I have stated, as the fact is, that the medicine, as thus prepared, is of great and uniform power, but it will, notwithstanding, be the object of my endeavour still further to improve this medicine.

The properties of the above-mentioned and other vegetable acids will, in particular, be the object of my future attention, and I shall hope to be permitted to submit the results of those and other investigations to the consideration of the members of the Royal College.

I have the honour to be, Gentlemen, your obedient servant,

(Signed) RICHARD BATTLEY.

PHYSIOLOGY OF VOMITING.

To the Editor of THE LANCET.

SIR:—In reading in THE LANCET of the 21st of April last the very interesting lecture on the nervous system, by Dr. M. Hall, I find that he has given a new theory of the act of vomiting. His experiments and reasoning appear quite conclusive, that vomiting is an effort of *expiration*, the more so, as anatomy and physiology are on his side; but in the application of these two sciences, he did not, I think, lay sufficient stress on one fact when he says,—"To effect this *open* state of the cardiac orifice, it is *probably* necessary that the diaphragm should, indeed, be in a relaxed rather than a contracted state." (§ 1118.)

Now, it is undeniably true, that the diaphragm *is* and *must be* relaxed, for of all the openings in this muscle, the œsophagean is the only one that is almost completely mus-

cular, and the *only* one that is *constricted* during the contraction of the diaphragm; and the more complete is this contracted state (as it would be in *inspiration*) the closer is the cardiac opening shut; *vice versâ*, the more flaccid this muscle is (*expiration*), the larger we find the cardiac orifice.

Were it not for this, in any violent exertion or effort of ordinary life, to accomplish which the lungs are distended, the diaphragm depressed by its own action, the abdominal muscles strongly contracted, and the stomach *violently compressed*, vomiting would be of very frequent occurrence; but it is not by the very wise provision that nature has made.

That Dr. Hall knew this fact I do not doubt, but he did not mention in his lecture (according to your report) the anatomical structure of the part, as an additional proof of his assertion; for I think that where anatomy coincides with any theory or explanation, it gives it infinitely more weight, I remain your humble servant,

C. Davies, M.D.P.

London, 3rd May, 1838.

MORTALITY OF HORSES.

The following extract is taken from the "Edinburgh Medical and Surgical Journ." No. 335. Mr. Marshall deserves great credit for having directed attention to a subject of so much interest to the public service, and so important in comparative pathology:—

The object of this paper is to submit some statistical facts in regard to —— Regiment of Heavy Dragoons, for a period of eight years, and, in so far as one corps may serve as a type or symbol of the cavalry in general, the results cannot but be interesting.

Table I.—The following table is intended to show the ages of the horses belonging to the regiment in question, according to the register in 1836 and 1837:—

1836.			1837.		
Age.	No.	Years.	Age.	No.	Years.
3 years + 8 =	24		3 years + 13 =	39	
4 d°	40	160	4 d°	23	92
5 d°	6	30	5 d°	22	110
6 d°	13	78	6 d°	33	198
7 d°	9	63	7 d°	16	112
8 d°	17	136	8 d°	10	80
9 d°	24	216	9 d°	4	36
10 d°	13	130	10 d°	17	170
11 d°	20	220	11 d°	20	220
12 d°	15	180	12 d°	12	144
13 d°	14	182	13 d°	13	169
14 d°	30	420	14 d°	10	140
15 d°	15	225	15 d°	11	165
16 & above	9	144	16 & above	38	608
	233)	2208		242)	2263
Average age....	9¼		Average age....	9¼	

From the above table, it appears that the mean age of the horses is about 9¼ years.

Table II.—This table will show the amount and the ratio of mortality among the horses, together with the number and ratio of horses cast* (discharged) in consequence of disabilities.

Years.	Strength.	Died.	Ratio of Deaths per Cent. of the Mean Strength.	Cast.	Ratio of Horses Cast per Cent. on Account of Disabilities.	Reduction of Horses by Death and Disabilities per Cent.
1830	245	6	2.4 or 1 in 41	16	6.5 or 1 in 15	8.9
1831	256	12	4.6 or 1 in 21	15	5.8 or 1 in 17	10.5
1832	268	10	3.7 or 1 in 27	13	4.8 or 1 in 20	8.5
1833	267	6	2.2 or 1 in 44	20	7.4 or 1 in 13	9.7
1834	250	2	.8 or 1 in 125	20	8.0 or 1 in 12	8.8
1835	248	4	1.6 or 1 in 62	35	14.1 or 1 in 7	15.7
1836	238	10	4.2 or 1 in 24	23	9.6 or 1 in 10	13.9
1837	244	8	3.2 or 1 in 30	26	10.6 or 1 in 9	13.9
Total..	2016	58		168		
Mean of eight years..	252	7 and 2-8ths	2.8 or 1 in 35	21	8.3 or 1 in 12	11.2 or 1 in 9

This table shows that the average annual strength of the regiment was 252, the average deaths 7.2-8ths, the centesimal ratio of deaths 2.8, the mean annual number of horses cast 21, the centesimal ratio of cast horses 8.3, and the mean annual reduction of the regiment by death and casting 11.2 per cent. The annual ratio of deaths was 1 in 35, and the ratio of horses cast 1 in 12, the loss by both deaths and casting being 1 in 9.

* To "cast" and to "cashier" may be derived from the barbarous Latin word "cassare," and the French "casser," to discard, break, disqualify.

TABLE III.—Shows the causes of the deaths which took place among the horses during a period of eight years.

Fatal Diseases and Accidents.	*Died.*
Diseases of the brain (staggers)	4
Lock-jaw (trismus)	2
Disease of the lungs	23
Hydrothorax (water in the chest)	1
Disease of the abdominal viscera	3
Shot on account of	
Farcy	3
Glanders	6
Fracture of a leg	6
— a coffin bone	1
— a knee (patella)	1
— the skull	1
— the pelvis	1
— the haunch bone	2
Injury of the spine by a fall	3
Injury by a cart	1
Total Deaths	58

From this table it is obvious that affection of the lungs is by far the most fatal disease among cavalry horses. It shows that two-fifths of the mortality has a pulmonary origin.

TABLE IV.—Shows the Number of Horses Cast during eight years; together with the Disabilities which rendered them unfit for Cavalry Duty.

Disabilities.	Cast.	Proportion of Cast Horses to Strength.	Mean Age of Horses Cast.	Extreme Ages.
Lameness	67	1 in 30	About 10	3 to 15 years
Worn out	33	1 in 61	.. 15	10 to 20 ..
Blindness	22	1 in 91	.. 9	5 to 17 ..
Broken winded	20	1 in 100	.. 11	8 to 16 ..
Unhealthy constitution	11	1 in 141	.. 10	7 to 16 ..
Vicious disposition, (chiefly kicking and biting)	9	1 in 221	.. 9	5 to 12 ..
Slowness of pace	3	1 in 672	.. 8	7 to 10 ..
	168	1 in 12	10 years	

With respect to the mean age of the horses cast, as stated in the above table, I may observe that it is 10 years; and that the mean age of the horses in 1836 was 9½, and in 1837, 9½ years.

Cast horses, although unfit for cavalry duty, may be useful for many other purposes. They are commonly sold by public auction, and bring, on an average, about 8*l.* or 9*l.* each.

ENORMOUS TUMOUR OF THE UPPER JAW

SUCCESSFULLY REMOVED BY OPERATION.

By R. O'SHAUGHNESSY, *Esq., M. R. C. S. Demonstrator of Anatomy, Medical College, Calcutta, and Superintendent of the Gurranhatta Dispensary.*

As tumours of the jaws have lately attracted much of the attention of some of the most distinguished surgeons in Europe, and as I have been given to understand that they are anything but uncommon in this country (though I cannot discover that tumours of any considerable size have, before the present instance, been removed from that region by any surgeon in India), I trust that the following case may be deemed worthy the notice of the Society, and perhaps, a place in their valuable Journal.

Woodey Morrol, æt. 21, a Hindu of the farmer caste, tall, thin and slightly emaciated, native of a village called Pangey, in the district of Kasba, which is a day's march from Jessore, and about three days' journey from Calcutta, presented himself at the Gurranhatta Dispensary on the 6th of November, 1837, under the following circumstances.

He says that about a year ago a swelling formed in his left cheek, immediately above the second grinder, about the size of a sparrow's egg, causing much pain and inconvenience; that it gradually increased in size, and about four months from its commencement, it had attained the bulk of a large orange, when he sought relief from a native doctor, who told him it was an abscess, which he promised to cure as soon as he thought it soft enough to puncture, and accordingly, in three or four days, though the hardness of the tumour did not at all diminish, he commenced his treatment by thrusting a needle into it, but no matter flowed from the wound thus formed; the doctor then set to work to bring it to a head, and for a few days more, frequently rubbed it with some mysterious compound which he appeared to prepare with great skill and care; but this disappointing his expectations also, he gave it up, and absconded. The puncture made into the swelling with the needle produced no ulcer or fungus, though the operation caused great pain and suffering to the patient.

From the time the doctor ceased his treat-

ment the tumour has gone on increasing; it gradually protruded into the mouth, and six months after its first appearance it commenced bleeding copiously once or twice a month, and he says the bleeding was more abundant and more certain to return at the full of the moon than at any other time during the month. This periodical discharge of blood did not produce any salutary alteration, or effect any check on the advancement of this frightful disease; it still continued to increase in pain and bulk till after filling the mouth so as nearly to produce suffocation, it at last (about six weeks ago) protruded from that cavity through the lips, and went on rapidly increasing up to the present day.

He positively says that he never received an injury of any kind in that cheek or jaw, and that he never had a tooth drawn or an unsound one. On his admission into the Dispensary, the tumour presented the following appearance.

An enormous growth completely occupied the left side of the face, rising to a level with the floor of the orbit and extending a long way below the inferior maxilla but unattached to it, occupying the whole of the anterior and left side of the mouth and protruding between the lips, pressing down the lower jaw, so as almost to make the chin touch the throat, and flattening the nose so as to leave no trace of the natural prominence of that organ. Still there was difficulty of swallowing, and the patient seemed to breath without inconvenience through the right nares. That portion of the tumour which protruded through the mouth, was of a bright red color and covered with mucous membrane, having at its upper part the canine and the two incisors of its own side, with the central incisor of the opposite maxilla, sticking out of it. The dimensions of this mass were as follows: from the part near the ear to the most prominent point which protruded from the mouth, exactly 12 inches, and from that part which bulged below the inferior maxilla to the edge of the orbit, about 10 inches. It looked, as near as may be, equal in size to the patient's head. The skin over the tumour was perfectly sound and not adhering to it, and many of the muscles of that cheek still retained their healthy actions; there was not the slightest trace of ulceration on any part of the tumour, and the principal source of pain to the patient appeared to be from distention and pressure on the surrounding parts.

He always hung a cloth upon the tumour, the end of which he kept constantly applied to his mouth for the purpose of collecting the saliva which was secreted in great abundance, and also to concentrate the sound of the voice when speaking.

Taking everything into consideration, the youth of the patient, and his general good health, and also the benign character of the tumour, and its freedom from any attachment to the lower jaw, I felt not only warranted but in duty bound to offer to this

poor sufferer the only chance now left for him of escaping a lingering and frightful death, which of course was only to be hoped for by his submitting to an operation, and he not only willingly, but joyfully acceded to the proposal.

I must here mention that what gave me greatest confidence—in fact, what made me feel almost certain of success was the perusal of a paper by Mr. Liston on "tumours of the mouth and jaws," in which he states several cases of enormous tumours of the upper jaw operated on by himself, and so successfully, that I did not doubt for a moment as to the issue of this case, as I considered my patient a much more favourable one to operate upon than any of those whom Mr. Liston mentions, though at the same time, the tumour was much larger than any removed by that justly celebrated surgeon, or indeed by any other surgeon in Europe, so far as I can ascertain.

On the 9th, three days after the patient was admitted into the Dispensary, I had him taken to the theatre of the Medical College, where, for the advantage of the pupils, and also as having there better light and room than in any apartment in my dispensary, I thought it best to operate.

The patient being seated in a stout arm chair, and his head supported by Dr. Corbyn, who kindly offered to undertake that charge, while a second assistant, Dr. Goodeve, stood at his left side prepared to make

pressure on the carotid artery, if at any time during the operation the bleeding called for such interference, I commenced the operation by making a cut through the skin over the upper part of the tumour, commencing at the posterior edge of the left malar bone and terminating in the upper lip, which I divided about an inch from the corresponding ala of the nose. I then cut from its bony attachments the cartilage of the nose, turned up the left ala and continued the dissection as far upwards as the edge of the orbit, and back to the zygomatic process of the malar bone, which I laid bare, and with a Liston's bone-nippers divided. I next carefully raised the periosteum of the floor and external side of the orbit with the handle of the knife, and again took the bone-nippers and cut through the malar bone into the spheno-maxillary fissure. I then cut through the orbital process of the superior maxilla with a strong knife, dividing the superior maxillary nerve at the same time; the nasal process of the superior maxilla was next cut, and then, after drawing the second incisor of the opposite side (for the extent of the disease required it), I cut through the alveolar process, and hard palate, as far back as the palatal process of the palate bone, with the bone-nippers; and now all the strong attachments of the tumour being completely severed, I had no difficulty in removing that mass, carefully separating with the knife the palatal process of the superior maxilla from the palatal plate of the palate bone, so as to preserve the soft palate from injury. The whole of the superior maxillary bone of the left side, part of the alveolar processes and palate plate of the superior maxilla of the opposite side, and also the malar bone of the left side, were involved in the disease.

The tumour weighed four pounds, it was nearly globular in form, having at its inferior surface a deep groove into which the lower jaw sunk, and the teeth before mentioned projecting from its anterior and upper part. In making a section right through its axis it was found to be of a dense fibro-cartilaginous structure surrounded for three-fourths of its entire extent by a pellicle of bone about the thickness of fine parchment, and where the bone was deficient by condensed mucous membrane.

During the whole time of the operation, which took near 10 minutes to complete, there was not the slightest need for interference with the carotid artery, or even to place a finger on a spouting vessel; and I should suppose, in all, the patient could not have lost more than from 8 to 9 oz. of blood; no ligatures were required, and a few minutes after the tumour was removed all bleeding ceased. Not a particle of the disease could have been left behind as the tumour came out whole and unbroken, except a small piece which pressed so high up against the floor of the orbit, that I was obliged to cut off when removing the great mass; but this came out immediately after without even having to use the knife for its removal.

I put a few dossils of lint into, and brought the edges of the wound together with five points of interrupted and three of the twisted sutures. As soon as this part of the opetion was finished the patient appeared to be slightly convulsed, and fainted; he was then laid on his back on the floor but after a few seconds revived again, when he sat up himself, and insisted on being allowed to swallow two or three tumblers of cold water; he was then placed in bed and a dossil of wet lint laid over the wound. I had given him 80 drops laudanum before the operation, but in about two hours after it, as he complained loudly of pain, I gave him 1 gr. mur. morphiæ, which set him to sleep after a short time.

9 P. M. Complaining of great pain, but in every respect is getting on satisfactorily; no oozing of blood from the wound, pulse 120, small, slight heat of skin, the wet lint to be kept constantly to the wound.

10. 6 A. M. Passed a good night, slept several hours and did not complain so much when he awoke as before falling asleep, pulse 100, still very small; heat of skin slightly increased, wound looking well, slight swelling and inflammation of the cheek.

12 o'clock, twenty-four hours after the operation. Complaining of great pain, but the lower part of wound united by the first intention; to take immediately 1 gr. mur. morphiæ.

9 P. M. Slept several hours after taking the morphia, and when he awoke felt so much relieved as to insist on being permitted to *smoke the hugga*, which the attendants say he managed very well with the sound side of his mouth; had two healthy stools in the course of the day; heat of skin not so much as it was in the morning; to get 11 gr. mur. morphia at 11 o'clock to-night.

11. 6 A. M. Passed a good night, slept soundly for several hours; wound looking well and nearly all united, swelling of face increased, heat of skin higher than yesterday, and he complained of pains all over his body: misturæ sennæ 1 oz. to be taken immediately.

8. P. M. The medicine operated on his bowels three or four times, and he has since been much relieved; has now no fever and only complains of the soreness of his mouth; ate some sago in the course of the afternoon and found no difficulty in swallowing.

12. Three days after the operation, wound of face quite healed except in one small point below the external angle of the eye; removed all the pins and sutures, and dressed the part with strips of isinglass plaster. The upper extremity of wound looks

much inflamed and as if likely to slough. There is much œdema and swelling of the lip, both above and below the part divided; flow of saliva from the mouth most profuse, so much so as to oblige him to keep his head constantly over a vessel to receive it: ordered some infusion of oak bark as a wash for mouth. I should have mentioned that the mouth remained as wide apart after the operation as before the tumour that distended it was removed; he appeared to have lost the power over the muscles that raise the lower jaw, but it is gradually closing, and I dare say, in a day or two more he will be able to shut it completely.

13. Slept well last night, no fever, and now makes but few complaints: the flowing from the mouth still very profuse.

14. No change, except that he can now shut his mouth.

15. The plaster got loose, and about an inch and a half of upper part of wound, which was united, has separated; a small slough has also come away from its upper corner, but the wound inside is filling up rapidly with healthy granulations. Patient's general health improving, pulse strong and regular, and he eats with a good appetite; brought the edges of the wound together again with some strips of common adhesive plaster, which I now think preferable for such wounds; œdema of lower part of face diminishing, and the flowing from the mouth not so profuse; skin contracting very much, and thickening.

20. Has been getting on very well, œdema of lower lip much reduced, and the mouth is now nearly as small as it ever could have been. He has perfect action over the obicularis oris at the wounded as well as the sound side of the mouth; the upper part of wound contracting slowly but not yet united; he is looking stouter than he was before the operation.

I may observe, before concluding this communication, that I consider this case as characterised by every mark which distinguishes the benign from the malignant form of tumour of the upper jaw. The skin was sound and unadhering to the tumour, the tumour itself was firm, and not painful to the touch, the patient's constitution was unimpaired, and the expression of his countenance was healthy; while, on the other hand, all the signs of malignancy were absent, there was no trace of unhealthy ulceration, or of the soft and bleeding fungi making their way through the integuments, no fetid discharge tinged with blood; nor were there any purple tubercles adhering to the subjacent tumour to be seen upon the skin, as occurs in cases of an unhealthy character; so I think, if I am to judge by the experience of those surgeons who have given much attention to the diseases of the jaws, and have published their opinions and the result of their observations, that I may safely conclude, that at least there is no probability of a return of the disease in the present instance.

There is one point worthy of remark in this case, that is, the rapidity of its growth, for we are told, that the progress of the benign tumours of the jaw is slow as well as painless; that, in fact, it is not till after several years existence they are found of any very considerable size; but I believe this statement only holds good as referring to the disease in Europeans, as I have been informed by several surgeons who have long resided in this country, that the rapid progress of such tumours in the natives of Bengal and the Upper Provinces is truly astonishing.

On the 14th of December, exactly five weeks after the operation, this man was discharged, perfectly cured, and a likeness of him taken on the day before he left the hospital.—*Calcutta Quarterly Journal*, Jan. 1838.

IMPERFORATION OF THE ANUS.

To the Editor of THE LANCET.

SIR:—I use the license of an old correspondent, to forward to you a statement of what I consider to be an interesting case of impervious rectum; the patient a fine healthy boy.

No stools having passed for two days, an examination was made. The anus was perfectly developed, the sphincter acting strongly when excited; and the rectum naturally pervious to the extent of three-fourths of an inch, at which point all track of the channel was perfectly obliterated; it felt as if the lower portion of the bowel had grown to the sacrum, on which part the distended bladder could be distinctly felt. A few days having elapsed without any prospect of change, I requested the assistance of Mr. Salmon, who concurred in the propriety of waiting until a larger collection of fæces should be accumulated, or untoward symptoms demand an operation.

The child sucked heartily, and slept soundly, exhibiting no signs of distress, and nature appeared to have set up a process for the amelioration of the mischief by copious perspiration, extraordinary secretion of urine, and accumulation of fat; there was likewise occasional vomiting.

On the *eleventh* day, the abdomen being somewhat tumefied, the operation was resolved on; at the last examination, no difference was perceived in the state of the parts from that of the first day; the obliteration was thought to extend so high, that the hoped for bagging of the fæces collected above the obliterated portion of the intestine, could not be certainly distinguished.

Mr. Salmon operated by introducing a trocar of the full size of a swan-quill, which

was cautiously insinuated between the bladder and sacrum, and passed through the obstructed bowel in the centre of the pelvis, so as to avoid the promontory of the sacrum, to the extent of two inches and a half. Upon withdrawing the trocar, the fæces flowed in extraordinary abundance through the canula; the infant uttered no cry, not a drop of blood was shed, *no traces of the meconium were to be found*, the whole vast discharge consisting of biliary fæces of one colour and consistence throughout. The canula was allowed to remain two hours, when a bougie being introduced through it for the extent of four inches, the former was withdrawn.

The bougie was removed the succeeding morning, and introduced and withdrawn three times a day until the fifth day, since which it has been merely passed once in twenty-four hours.

From the birth of the child to this, the twenty-third day after the operation, the infant has not had an hour's ailment, or taken any medicine, with the exception of a few doses of castor-oil.

May not the successful termination of this case be, in a great measure, attributable to the large size of the trocar used, by which a free and sufficient opening was at *once* made, thus rendering any subsequent dilatation unnecessary.

Had a moderate-sized trocar been selected, not only would the aperture have been insufficient, but the canula must, in all probability, have been withdrawn, as it would have been a matter of difficulty, if not impossibility, for the fæces to have passed through it, and thus a change being made in the relative position of the parts, some embarrassment would necessarily have ensued; it is clear, likewise, that the occasional introduction of a bougie, instead of having one constantly in the rectum, assisted in preventing any subsequent irritation or inflammation. I have the honour to be, Sir, your very obedient humble servant,

C. E. JENKINS.

Great Prescott-street, April, 1838.

AGES OF FRENCH PEERS.

COUNT D'ARGOUT lately stated the following facts in a debate, in the French Chamber of Peers. It will be seen that French Peers equal English Peers, at least in senility. The French Peers amount to 305; and their collective ages make 18,582 years. The average age is 61 years; or more accurately 60.92 years; and, with a correction that should probably be made, 61.42 years. This may be compared with the interesting paper by Mr. Edmonds, on English Peers.*

* Lancet, p. 705. Vol. I. 1838.

Ages.	Numbers.
Under 30	*9
30—39	17
40—49	18
50—59	83
60—69	105
70—79	54
80—93	19
	305

It may be added that the French Chamber comprises 26 judges (magistrates), 22 *administrateurs*, 10 diplomatists, 95 generals or marshals, 8 admirals or vice-admirals, 3 officers of the National Guard, 6 members of the Institute, 4 ministers, and 2 princes of the blood. It should also, however, be remembered, that the present French Chamber of Peers is not hereditary, but that a great portion of the members comprising it has been created by King Louis Philippe. This will, in some measure, account for the senility of the members of the Upper House in France.

* Under 30, Peers have no vote.

PRESERVATION OF PARTS FOR DISSECTION.—A correspondent writes as follows:—When speaking of different modes of making preparations and preserving parts of the dead body, in his life of the celebrated Ruysch, Mr. Pettigrew has introduced his son's name, coupled with that of the great anatomist, in order to state that "Mr. William Pettigrew has been in the habit, in the course of his dissections, of injecting into the different parts of the human body a small solution of arsenic, the effect of which is to resist putrefaction and render haste unnecessary in the pursuit of anatomical inquiry. He has found a limb at the expiration of two months as well fitted for the purposes of dissection as at the time usually selected after decease." It happens that I, along with other pupils of Dr. Hunter Lane, amongst whom was Mr. William Pettigrew, had an opportunity last spring of seeing Dr. Lane perform the experiment, *proposed by himself*, for preserving subjects from decay, viz., of injecting an upper extremity with a solution of the *arseniate of potash*, the preparation, doubtless, to which Mr. Pettigrew alludes, and which he has pirated for his son.

TO CORRESPONDENTS.

We have unexpectedly been compelled to defer, until next week, the publication of a detailed account of the experiments in Mesmerism, lately made by Dr. Elliotson, at University College Hospital.

We cannot insert such puffs and personal attacks as are contained in the letter of *Anti-Mendax*.

Mr. Mullinell's letter has been received.